AUTORITATEA AERONAUTICĂ CIVILĂ

A REPUBLICII MOLDOVA

AMC & GM la REG-ADR

MIJLOACE ACCEPTABILE

de punere în CONFORMITATE (AMC)

și MATERIAL de ÎNDRUMARE (GM)

la

Regulamentul privind procedurile administrative referitoare la aerodromuri

Ediţia 01/ 2019

REPUBLICA MOLDOVA
MINISTERUL ECONOMIEI

РЕСПУБЛИКА МОЛДОВА
МИНИСТЕРСТВО ЭКОНОМИКИ

O R D I N

cu privire la rectificarea unor prevederi din actele tehnico-normative „Cerinţele tehnice privind proiectarea şi exploatarea aerodromurilor” (CT-AD) şi „Specificaţii de certificare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (CS-ADR-DSN), precum şi „Mijloace acceptabile de punere în conformitate şi Material de îndrumare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (AMC & GM la REG-ADR)

nr. 54/GEN din 29.11.2021

Monitorul Oficial nr.302-306/1397 din 10.12.2021

* * *

În temeiul art.7 alin.(3) pct.1) lit.b), d) din Codul aerian al Republicii Moldova nr.301/2017, precum şi pct.10 alin.(1) lit.b), d) din Regulamentul cu privire la organizarea şi funcţionarea Autorităţii Aeronautice Civile, aprobat prin Hotărârea Guvernului Republicii Moldova nr.133/2019, art.70 alin.(2) din Legea cu privire la actele normative nr.100/2017, având în vedere că Organizaţia Aviaţiei Civile Internaţionale a înlocuit Circulara 329 cu Circulara 355, întru corectarea trimiterilor în cuprinsul actelor tehnico-normative „Cerinţele tehnice privind proiectarea şi exploatarea aerodromurilor” (CT-AD), Ediţia 04, aprobat prin Ordinul nr.58/GEN din 30.10.2019 (Monitorul Oficial al Republicii Moldova, 2019, nr.338-343, art.1892), cu modificările ulterioare, şi „Specificaţii de certificare (CS-ADR-DSN) la Regulamentul privind procedurile administrative referitoare la aerodromuri”, Ediţia 01, aprobat prin Ordinul nr.17/GEN din 15.04.2019 (Monitorul Oficial al Republicii Moldova, 2019, nr.148-158, art.723), cu modificările ulterioare, precum şi „Mijloace acceptabile de punere în conformitate şi Material de îndrumare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (AMC & GM la REG-ADR), Ediţia 01, aprobat prin Ordinul nr.19/GEN din 15.04.2019 (Monitorul Oficial al Republicii Moldova, 2019, nr.148-158, art.725), cu modificările ulterioare,

ORDON:

1. Se efectuează rectificări, conform anexei la prezentul Ordin, în următoarele acte emise de Autoritatea Aeronautică Civilă:

1) actul tehnico-normativ „Cerinţele tehnice privind proiectarea şi exploatarea aerodromurilor” (CT-AD);

2) actul tehnico-normativ „Specificaţii de certificare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (CS-ADR-DSN);

3) „Mijloace acceptabile de punere în conformitate şi Material de îndrumare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (AMC & GM la REG-ADR).

2. Autoritatea Aeronautică Civilă va pune la dispoziţia tuturor persoanelor interesate anexa la prezentul ordin prin publicarea pe pagina web oficială www.caa.md, la rubrica „Cadrul normativ – Cerinţe tehnice”, „Cadrul normativ – CS” şi „Cadrul normativ – AMC”.

3. Prezentul ordin intră în vigoare la data publicării în Monitorul Oficial al Republicii Moldova.

DIRECTOR INTERIMAR **Vasile ŞARAMET**

Nr.54/GEN. Chişinău, 29 noiembrie 2021.

Anexă
la Ordinul nr. 54/GEN
din 29.11.2021

Se efectuează următoarele rectificări în actele emise de Autoritatea Aeronautică Civilă:

1) În actul tehnico-normativ ”Cerințele tehnice privind proiectarea și exploatarea aerodromurilor” (CT-AD), pct. 2.9.10 Nota 1, pct. 10.2.3 Nota și pct. 10.2.4 Nota 1 cifrele ”329” se înlocuiesc cu cifrele ”355”;

2) În actul tehnico-normativ ”Specificații de certificare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (CS-ADR-DSN), pct. CS ADR-DSN.B.090 lit. (ba) Note, cifrele ”329” se înlocuiesc cu cifrele ”355”;

3) În ”Mijloace acceptabile de punere în conformitate și Material de îndrumare la Regulamentul privind procedurile administrative referitoare la aerodromuri” (AMC & GM la REG-ADR), pct. GM1 ADR.OP.A.005 Condition of the Movement area and related facilities lit. j) Note 1, cifrele ”329” se înlocuiesc cu cifrele ”355”.

REPUBLICA MOLDOVA
MINISTERUL ECONOMIEI
ŞI INFRASTRUCTURII

РЕСПУБЛИКА МОЛДОВА
МИНИСТЕРСТВО ЭКОНОМИКИ
И ИНФРАСТРУКТУРЫ

O R D I N

cu privire la aprobarea amendamentului nr.02 la „Mijloace acceptabile de punere în conformitate şi materiale de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri", ediţia 01

nr. 44/GEN din 21.10.2020

Monitorul Oficial nr.286-292/1101 din 06.11.2020

* * *

În temeiul articolului 7 alineatul (3) punctul 1) litera d) şi art.35 alineatul (10) din Codul aerian al Republicii Moldova nr.301/2017, precum şi al punctului 10 alineatul 1) litera d) din Regulamentul cu privire la organizarea şi funcţionarea Autorităţii Aeronautice Civile, aprobat prin Hotărârea Guvernului Republicii Moldova nr.133/2019, întru executarea atribuţiilor ce revin Autorităţii Aeronautice Civile în calitate de autoritate administrativă de certificare, supraveghere continuă şi control în domeniul aviaţiei civile, pentru asigurarea concordanţei cu Standardele şi Practicile Recomandate (SARPs) ale Organizaţiei Aviaţiei Civile Internaţionale urmare a aprobări Amendamentului 15 la Anexa 14, volumul I „Aerodromuri. Proiectarea şi exploatarea aerodromurilor" la Convenţia privind aviaţia civilă internaţională, luând în consideraţie Scrisoarea de stat OACI 073e referitor la modificarea datei de aplicare a noului format global de evaluare şi raportare a condiţiilor suprafeţei pistei (GRF),

ORDON:

1. Se aprobă amendamentul nr.02 la „Mijloace acceptabile de punere în conformitate şi materiale de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri", ediţia 01, conform Anexei la prezentul ordin.

2. Autoritatea Aeronautică Civilă va pune la dispoziţia tuturor persoanelor interesate Anexa la prezentul ordin prin publicarea pe pagina web oficială www.caa.md, la rubrica „Cadrul normativ – AMC".

3. Amendamentul nr.02 la „Mijloace acceptabile de punere în conformitate şi materiale de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri", ediţia 01, se aplică din data publicării prezentului ordin în Monitorul Oficial al Republicii Moldova.

4. Prezentul ordin intră în vigoare la data publicării în Monitorul Oficial al Republicii Moldova.

DIRECTOR **Eugeniu COŞTEI**

Nr.44/GEN. Chişinău, 21 octombrie 2020.

REPUBLICA MOLDOVA
MINISTERUL ECONOMIEI
ŞI INFRASTRUCTURII

РЕСПУБЛИКА МОЛДОВА
МИНИСТЕРСТВО ЭКОНОМИКИ
И ИНФРАСТРУКТУРЫ

O R D I N

cu privire la aprobarea amendamentului nr.01 la „Mijloace acceptabile de punere în conformitate şi materiale de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri", ediţia 01

nr. 22/GEN din 02.06.2020

Monitorul Oficial nr.142-146/520 din 12.06.2020

* * *

În temeiul articolului 7 alineatul (3) punctul 1) litera d) şi art.35 alineatul (10) din Codul aerian al Republicii Moldova nr.301/2017, precum şi punctului 10 alineatul 1) litera d) din Regulamentul cu privire la organizarea şi funcţionarea Autorităţii Aeronautice Civile, aprobat prin Hotărârea Guvernului Republicii Moldova nr.133/2019, întru executarea atribuţiilor ce revin Autorităţii Aeronautice Civile în calitate de autoritate administrativă de certificare, supraveghere continuă şi control în domeniul aviaţiei civile, pentru asigurarea concordanţei cu Standardele şi Practicile Recomandate (SARPs) a Organizaţiei Aviaţiei Civile Internaţionale din Anexa 14, volumul I „Aerodromuri. Proiectarea şi explotarea aerodromurilor" la Convenţia privind aviaţia civilă internaţională,

ORDON:

1. Se aprobă amendamentul nr.01 la „Mijloace acceptabile de punere în conformitate şi materiale de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri", ediţia 01, conform Anexei la prezentul ordin.

2. Autoritatea Aeronautică Civilă va pune la dispoziţia tuturor persoanelor interesate Anexa la prezentul ordin prin publicarea pe pagina-web oficială www.caa.md, la rubrica „Cadrul normativ – AMC".

3. Amendamentul nr.01 la „Mijloace acceptabile de punere în conformitate şi materiale de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri", ediţia 01, se aplică din data publicării prezentului Ordin în Monitorul Oficial al Republicii Moldova.

4. Prezentul Ordin intră în vigoare la data publicării în Monitorul Oficial al Republicii Moldova.

DIRECTOR **Eugeniu COŞTEI**

Nr.22/GEN. Chişinău, 2 iunie 2020.

REPUBLICA MOLDOVA
MINISTERUL ECONOMIEI
ŞI INFRASTRUCTURII

РЕСПУБЛИКА МОЛДОВА
МИНИСТЕРСТВО ЭКОНОМИКИ
И ИНФРАСТРУКТУРЫ

O R D I N
cu privire la aprobarea mijloacelor acceptabile de punere în conformitate şi a materialelor de îndrumare (AMC&GM REG-ADR) la Regulamentul privind procedurile administrative referitoare la aerodromuri

nr. 19/GEN din 15.04.2019

Monitorul Oficial nr.148-158/725 din 26.04.2019

* * *

În temeiul art.7 alin.(3) punctul 1) lit.d) şi art.35 alin.(10) din Codul aerian al Republicii Moldova nr.301/2017, întru executarea atribuţiilor ce îi revin Autorităţii Aeronautice Civile în calitate de autoritate administrativă de certificare, supraveghere continuă şi control în domeniul aviaţiei civile, în scopul asigurării implementării Regulamentului privind procedurile administrative referitoare la aerodromuri, aprobat prin Hotărârea Guvernului nr.653/2018,

ORDON:

1. Se aprobă mijloacele acceptabile de punere în conformitate şi materialele de îndrumare (AMC&GM REG-ADR) ediţia 01 la Regulamentul privind procedurile administrative referitoare la aerodromuri, conform anexei la prezentul ordin.

2. Autoritatea Aeronautică Civilă va pune la dispoziţia tuturor persoanelor interesate anexa la prezentul ordin prin publicarea pe pagina web oficială www.caa.md, la compartimentul Cadrul normativ – Mijloace acceptabile de punere în conformitate (AMC).

3. Operatorii de aerodromuri/aeroporturi care cad sub incidenţa prevederilor Regulamentului privind procedurile administrative referitoare la aerodromuri vor utiliza mijloacele acceptabile de punere în conformitate şi materialele de îndrumare (AMC&GM REG-ADR) în scopul certificării aerodromurilor.

4. Prezentul ordin intră în vigoare la data publicării în Monitorul Oficial al Republicii Moldova.

DIRECTORUL
AUTORITĂŢII AERONAUTICE CIVILE Octavian NICOLAESCU

Nr.19/GEN. Chişinău, 15 aprilie 2019.

Definitions for terms used in annexes I to III

Annex I — Acceptable Means of Compliance and Guidance Material to ADR-AR

Annex II — Acceptable Means of Compliance and Guidance Material to ADR-OR

Annex III — Acceptable Means of Compliance and Guidance Material to ADR-OPS

CONTENTS

PAGES CONTROL LIST

Page Number	Edition / Amendment	Date
Content	01 / 00	April 2019
Pages control list	01 / 01	April 2019 / June 2020
1	01 / 00	April 2019
2	01 / 00	April 2019
3	01 / 00	April 2019
4	01 / 00	April 2019
5	01 / 00	April 2019
6	01 / 00	April 2019
7	01 / 00	April 2019
8	01 / 00	April 2019
9	01 / 00	April 2019
10	01 / 00	April 2019
11	01 / 00	April 2019
12	01 / 00	April 2019
13	01 / 00	April 2019
14	01 / 00	April 2019
15	01 / 00	April 2019
16	01 / 00	April 2019
17	01 / 02	October 2020
18	01 / 00	April 2019
19	01 / 00	April 2019
20	01 / 00	April 2019
21	01 / 00	April 2019
22	01 / 00	April 2019
23	01 / 00	April 2019
24	01 / 00	April 2019
25	01 / 00	April 2019
26	01 / 00	April 2019
27	01 / 00	April 2019
28	01 / 00	April 2019
29	01 / 00	April 2019
30	01 / 00	April 2019
31	01 / 00	April 2019
32	01 / 00	April 2019
33	01 / 00	April 2019
34	01 / 00	April 2019
35	01 / 00	April 2019
36	01 / 00	April 2019
37	01 / 00	April 2019
38	01 / 00	April 2019
39	01 / 00	April 2019
40	01 / 00	April 2019
41	01 / 00	April 2019
42	01 / 00	April 2019
43	01 / 00	April 2019
44	01 / 00	April 2019
45	01 / 00	April 2019
46	01 / 00	April 2019

Page Number	Edition / Amendment	Date
47	01 / 00	April 2019
48	01 / 00	April 2019
49	01 / 00	April 2019
50	01 / 00	April 2019
51	01 / 00	April 2019
52	01 / 00	April 2019
53	01 / 00	April 2019
54	01 / 00	April 2019
55	01 / 00	April 2019
56	01 / 00	April 2019
57	01 / 00	April 2019
58	01 / 00	April 2019
59	01 / 00	April 2019
60	01 / 00	April 2019
61	01 / 00	April 2019
62	01 / 00	April 2019
63	01 / 00	April 2019
64	01 / 00	April 2019
65	01 / 00	April 2019
66	01 / 00	April 2019
67	01 / 00	April 2019
68	01 / 00	April 2019
69	01 / 00	April 2019
70	01 / 00	April 2019
71	01 / 00	April 2019
72	01 / 00	April 2019
73	01 / 00	April 2019
74	01 / 00	April 2019
75	01 / 00	April 2019
76	01 / 00	April 2019
77	01 / 00	April 2019
78	01 / 00	April 2019
79	01 / 00	April 2019
80	01 / 00	April 2019
81	01 / 00	April 2019
82	01 / 00	April 2019
83	01 / 00	April 2019
84	01 / 00	April 2019
85	01 / 00	April 2019
86	01 / 00	April 2019
87	01 / 00	April 2019
88	01 / 00	April 2019
89	01 / 02	October 2020
90	01 / 00	April 2019
91	01 / 02	October 2020
92	01 / 00	April 2019
93	01 / 00	April 2019
94	01 / 00	April 2019
95	01 / 02	October 2020

Page Number	Edition / Amendment	Date
96	01 / 01	April 2019 / June 2020
97	01 / 02	October 2020
98	01 / 01	April 2019 / June 2020
99	01 / 01	April 2019 / June 2020
100	01 / 01	April 2019 / June 2020
101	01 / 00	April 2019
102	01 / 00	April 2019
103	01 / 00	April 2019
104	01 / 00	April 2019
105	01 / 00	April 2019
106	01 / 00	April 2019
107	01 / 00	April 2019
108	01 / 00	April 2019
109	01 / 00	April 2019
110	01 / 00	April 2019
111	01 / 00	April 2019
112	01 / 00	April 2019
113	01 / 00	April 2019
114	01 / 00	April 2019
115	01 / 00	April 2019
116	01 / 00	April 2019
117	01 / 00	April 2019
118	01 / 00	April 2019
119	01 / 00	April 2019
120	01 / 00	April 2019
121	01 / 00	April 2019
122	01 / 00	April 2019
123	01 / 00	April 2019
124	01 / 02	October 2020
125	01 / 00	April 2019
126	01 / 02	October 2020
127	01 / 00	April 2019
128	01 / 00	April 2019
129	01 / 00	April 2019
130	01 / 00	April 2019
131	01 / 00	April 2019
132	01 / 00	April 2019
133	01 / 00	April 2019
134	01 / 00	April 2019
135	01 / 00	April 2019
136	01 / 02	October 2020
137	01 / 00	April 2019
138	01 / 00	April 2019
139	01 / 01	April 2019 / June 2020
140	01 / 01	April 2019 / June 2020
141	01 / 00	April 2019
142	01 / 00	April 2019
143	01 / 00	April 2019
144	01 / 00	April 2019
145	01 / 00	April 2019
146	01 / 00	April 2019
147	01 / 00	April 2019

Page Number	Edition / Amendment	Date
148	01 / 00	April 2019
149	01 / 00	April 2019
150	01 / 02	October 2020
151	01 / 00	April 2019
152	01 / 00	April 2019
153	01 / 00	April 2019
154	01 / 00	April 2019
155	01 / 00	April 2019
156	01 / 00	April 2019
157	01 / 00	April 2019
158	01 / 00	April 2019
159	01 / 01	April 2019 / June 2020
160	01 / 02	October 2020
161	01 / 00	April 2019
162	01 / 00	April 2019
163	01 / 00	April 2019 / June 2020
164	01 / 00	April 2019
165	01 / 00	April 2019
166	01 / 00	April 2019
167	01 / 00	April 2019
168	01 / 00	April 2019
169	01 / 02	October 2020
170	01 / 00	April 2019
171	01 / 02	October 2020
172	01 / 00	April 2019
173	01 / 00	April 2019
174	01 / 00	April 2019
175	01 / 00	April 2019

DEFINITIONS FOR TERMS USED IN ANNEXES I to III

'**CAA'** means Civil Aviation Authority of the Republic of Moldova;

'Guidance Material' (GM) means material developed by the CAA that helps to illustrate the meaning of a requirement or specification, and is used to support the interpretation of the Aviation Code, Implementing Rules (IR), and AMC.

'Implementing Rules' (**IR)** means Government decision no.653/2018 on approval of the Regulation regarding administrative procedures related to aerodromes, which are binding in their entirety and used to specify technical requirements and administrative procedures related to aerodromes.

'accelerate-stop distance available (ASDA)' means the length of the take-off run available plus the length of the stopway, if provided;

'aerodrome control service' means an air traffic control (ATC) service for aerodrome traffic;

'aerodrome equipment' means any equipment, apparatus, appurtenance, software or accessory, that is used or intended to be used to contribute to the operation of aircraft at an aerodrome;

'aeronautical data' means a representation of aeronautical facts, concepts or instructions in a formalized manner suitable for communication, interpretation or processing;

'aeronautical information service' means a service established within the defined area of coverage responsible for the provision of aeronautical information and data necessary for the safety, regularity, and efficiency of air navigation;

'air navigation services' means air traffic services; communication, navigation and surveillance services; meteorological services for air navigation, and aeronautical information services;

'air traffic services' means the various flight information services, alerting services, air traffic advisory services and air traffic control services (area, approach and aerodrome control services);

'air traffic control (ATC) service' means a service provided for the purpose of:

1. preventing collisions:
   - between aircraft, and
   - in the manoeuvring area between aircraft and obstructions; and
2. expediting and maintaining an orderly flow of air traffic;

'aircraft stand' means a designated area on an apron intended to be used for parking an aircraft;

'aircraft stand taxilane' means a portion of an apron designated as a taxiway and intended to provide access to aircraft stands only;

'alternative means of compliance (AltMoC)' are those that propose an alternative to an existing Acceptable Means of Compliance or those that propose new means to establish compliance with the Aviation Code and Implementing Rules for which no associated Acceptable Means of Compliance have been adopted by the CAA;

'alerting service' means a service provided to notify relevant organizations regarding aircraft in need of search and rescue aid, and to assist such organizations as required;

'apron taxiway' means a portion of a taxiway system located on an apron and intended to provide a through taxi-route across the apron;

'**clearway'** means a defined rectangular area on the ground or water under the control of the appropriate entity, selected or prepared as a suitable area over which an aeroplane may make a portion of its initial climb to a specified height;

'dangerous goods' means articles or substances which are capable of posing a risk to health, safety, property or the environment and which are shown in the list of dangerous goods in the Technical Instructions or which are classified according to those Technical Instructions;

'data quality' means a degree or level of confidence that the data provided meet the requirements of the data user in terms of accuracy, resolution and integrity;

'declared distances' means:

- 'take-off run available (**TORA**)',
- 'take-off distance available (**TODA**)',
- 'accelerate-stop distance available (**ASDA**)',
- 'landing distance available (**LDA**)';

'flight information service' means a service provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights;

'human factors principles' means principles which apply to aeronautical design, certification, training, operations and maintenance and which seek safe interface between the human and other system components by proper consideration to human performance;

'human performance' means human capabilities and limitations which have an impact on the safety and efficiency of aeronautical operations;

'instrument runway' means one of the following types of runways intended for the operation of aircraft using instrument approach procedures:

1. '**non-precision approach runway**': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type A instrument approach operation;
2. '**precision approach runway, category I**': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT I instrument approach operation;
3. '**precision approach runway, category II**': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT II instrument approach operation;
4. '**precision approach runway, category III**': a runway served by visual aids and at least one non-visual aid, intended for landing operations following a type B CAT IIIA, IIIB or IIIC instrument approach operation to and along the surface of the runway;

'integrity' means a degree of assurance that an aeronautical data and its value has not been lost nor altered since the data origination or authorized amendment.

'landing distance available (LDA)' means the length of runway which is declared available and suitable for the ground run of an aeroplane landing;

'low visibility procedures' means procedures applied at an aerodrome for the purpose of ensuring safe operations during lower than Standard Category I, other than Standard Category II, Category II and III approaches and low visibility take-offs;

'low visibility take-off (LVTO)' means a take-off with a runway visual range (RVR) lower than 400 m but not less than 75 m;

'lower than Standard Category I operation' means a Category I instrument approach and landing operation using Category I decision height (DH), with a runway visual range (RVR) lower than would normally be associated with the applicable decision height (DH) but not lower than 400 m;

'manoeuvring area' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft, excluding aprons;

'meteorological services' means those facilities and services that provide aircraft with meteorological forecasts, briefs and observations as well as any other meteorological information and data provided by States for aeronautical use;

'marker' means an object displayed above ground level in order to indicate an obstacle or delineate a boundary;

'marking' means a symbol or group of symbols displayed on the surface of the movement area in order to convey aeronautical information;

'movement area' means that part of an aerodrome to be used for the take-off, landing and taxiing of aircraft consisting of the manoeuvring area and the apron(s);

'navigation services' means those facilities and services that provide aircraft with positioning and timing information;

'non-instrument runway' means a runway intended for the operation of aircraft using visual approach procedures;

'other than Standard Category II operation' means a precision instrument approach and landing operation using ILS or MLS where some or all of the elements of the precision approach Category II light system are not available, and with:

- decision height (DH) below 200 ft but not lower than 100 ft; and
- runway visual range (RVR) of not less than 350 m;

'oversight planning cycle' means a time period in which continued compliance is verified;

'rapid exit taxiway' means a taxiway connected to a runway at an acute angle and designed to allow landing aeroplanes to turn off at higher speeds than are achieved on other exit taxiways thereby minimizing runway occupancy times;

'runway' means a defined rectangular area on a land aerodrome prepared for the landing and take-off of aircraft;

'runway type' means instrument runway or non-instrument runway

'runway visual range (RVR)' means the range over which the pilot of an aircraft on the centre line of a runway can see the runway surface markings or the lights delineating the runway or identifying its centre line;

'safety management system' means a systematic approach to managing safety including the necessary organizational structure, accountabilities, policies and procedures;

'stopway' means a defined rectangular area on the ground at the end of take-off run available prepared as a suitable area in which an aircraft can be stopped in the case of an abandoned take-off;

'take-off distance available (TODA)' means the length of the take-off run available plus the length of the clearway, if provided;

'take-off run available (TORA)' means the length of runway declared available and suitable for the ground run of an aeroplane taking off;

'taxiway' means a defined path on a land aerodrome established for the taxiing of aircraft and intended to provide a link between one part of the aerodrome and another, including:

- aircraft stand taxilane,
- apron taxiway,
- rapid exit taxiway;

'Technical Instructions' means the latest effective edition of the 'Technical Instructions for the Safe Transport of Dangerous Goods by Air' (Doc 9284-AN/905), including the Supplement and any Addenda, approved and published by the International Civil Aviation Organization;

'terms of the certificate' means the following:

- ICAO location indicator,
- conditions to operate (VFR/IFR, day/night),
- runway — declared distances,
- runway type(s) and approaches provided,
- aerodrome reference code,
- scope of aircraft operations with higher aerodrome reference code letter,
- provision of apron management services (yes/no),
- rescue and firefighting level of protection;

'type A instrument approach operation' means an instrument approach operation with a minimum descent height or decision height at or above 75 m (250 ft);

'type B instrument approach operation' means an instrument approach operation with a decision height below 75 m (250 ft). Type B instrument approach operations are categorised as follows:

1. **Category I (CAT I)**: a decision height not lower than 60 m (200 ft) and with either a visibility not less than 800 m or a runway visual range not less than 550 m;
2. **Category II (CAT II)**: a decision height lower than 60 m (200 ft), but not lower than 30 m (100 ft) and a runway visual range not less than 300 m;
3. **Category IIIA (CAT IIIA)**: a decision height lower than 30 m (100 ft) or no decision height and a runway visual range not less than 175 m;
4. **Category IIIB (CAT IIIB)**: a decision height lower than 15 m (50 ft) or no decision height and a runway visual range less than 175 m, but not less than 50 m;
5. **Category IIIC (CAT IIIC)**: no decision height and no runway visual range limitation;

'visual aids' means indicators and signalling devices, markings, lights, signs and markers or combinations thereof.

GM TO THE ADMINISTRATIVE PROCEDURE RELATING TO AERODROMES

GM1 to Article 8 Chapter III Oversight of Aerodromes

FUNCTIONAL SEPARATION

The CAA is a certification, oversight and control authority in the field of civil aviation. Its functions are clearly separated and the organizational governance ensures effective oversight by avoiding conflicts of interest by personnel and prevent their engagement in operational activities of the entities that they are meant to oversee. This could be achieved by applying appropriate management and control mechanisms.

GM1 to Chapter VII Safeguarding of aerodrome surroundings

OTHER SURFACES

Other surfaces associated with the aerodrome are surfaces that need to be established when operating in accordance with ICAO PANS-OPS Doc 8168 (Procedures for Air Navigation Services - Aircraft Operations), Volume II. The term ‘surfaces’ in this meaning is not used uniformly in different sources of information where also terms ‘area’ or ‘zone’ may be used.

ANNEX I ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL TO ADR-AR. AUTHORITY REQUIREMENTS — AERODROMES

SUBPART A —GENERAL REQUIREMENTS (ADR.AR.A)

GM1 ADR.AR.A.010(b) Oversight documentation

AVAILABILITY OF DOCUMENTATION TO THIRD PARTIES

The legislative acts, standards, rules, technical requirements, and similar documents should be made available, in a timely manner, to the aerodrome/airport operators and any other interested party in various ways and formats, such as via its website, the government's official gazette, or any other similar means.

The way for making such material available is for the CAA to decide.

Making such documentation available is without prejudice to the application of rules regarding protection of intellectual property rights, or similar applicable legislation.

AMC1 ADR.AR.A.015(d) Means of compliance

GENERAL

The information to be provided to following approval of an alternative means of compliance should contain a reference to the Acceptable Means of Compliance (AMC) to which such means of compliance provides an alternative, as well as a reference to the corresponding Implementing Rule, indicating as applicable the subparagraph(s) covered by the alternative means of compliance.

GM1 ADR.AR.A.015 Means of compliance

GENERAL

Alternative means of compliance used by the CAA or by organizations under its oversight may be used by other organizations only if processed again in accordance with ADR.AR.A.015 (d) and (e).

AMC1 ADR.AR.A.030(c) Immediate reaction to a safety problem

NOTIFICATION OF MEASURES

When the CAA directs a measure to a provider of apron management services, these measures should also be notified to the aerodrome/airport operator.

GM1 ADR.AR.A.040(b) Safety Directives

FORWARDING OF SAFETY DIRECTIVES

The safety directives that should be forwarded under ADR.AR.A.040 include, but are not limited to, cases like the following ones, where the CAA has determined:

(a) that it is necessary to include additional certification specifications in the certification basis of an aerodrome;

(b) that aerodrome equipment has presented unusual, or frequent, or otherwise unjustified malfunctions or failures;

(c) that the certification specifications established by the CAA are such that under given conditions additional action is required to be undertaken in order to maintain the level of safety;

(d) that there is immediate need to take certain action in order to respond to a safety recommendation or following an accident or serious incident; or

(e) that this or a similar unsafe condition may be present at other aerodromes of the Republic of Moldova.

The CAA may issue directives (which may be called operational directives, or otherwise) during its oversight activities, such as an instruction to the aerodrome/airport operator to abstain from a certain activity, or a positive action (e.g. cutting of trees which are found to penetrate the OLS, or the removal of certain object from the aerodrome etc.) needed to maintain the level of safety.

SUBPART B — MANAGEMENT (ADR.AR.B)

AMC1 ADR.AR.B.005(a) Management system

GENERAL

(a) The following should be considered when deciding upon the required organizational structure:

(1) the number of certificates and approvals to be issued;

(2) the number of declared organizations;

(3) the number and complexity of aerodromes, aerodrome/airport operators, and providers of apron management services within the Republic of Moldova;

(4) the possible allocation of tasks to third natural or legal persons of resources needed to fulfill the continuing oversight obligations;

(5) the level of civil aviation activity;

(6) the size of the national aviation industry; and

(7) the potential growth of activities in the field of civil aviation.

(b) The set-up of the organizational structure should ensure that carrying out the various tasks and obligations of the CAA do not rely solely on individuals. A continuous and undisturbed fulfilment of these tasks and obligations of the CAA should also be guaranteed in case of illness, accident, or leave of individual employees.

GM1 ADR.AR.B.005(a) Management system

GENERAL

(a) The CAA should be organized in such a way that:

(1) there is specific and effective management authority in the conduct of all relevant activities;

(2) the functions and processes described in the applicable requirements of the Aviation Code, and IR, AMCs, CSs, and GM may be properly implemented;

(3) the CAA's organization and operating procedures for the implementation of the applicable requirements of the Aviation Code and IR are properly documented and applied;

(4) all CAA personnel involved in the related activities are provided with training where necessary;

(5) specific and effective provision is made for the communication and interface as necessary with the competent authorities of other states; and

(6) all functions related to implementing the applicable requirements are adequately described.

(b) A general policy, in respect of activities related to the applicable requirements of the Aviation Code and IR, including certification specifications, should be developed, promoted, and implemented by the manager at the highest appropriate level; for example Head of the functional area of the CAA that is responsible for such activities.

(c) Appropriate steps should be taken to ensure that the policy is known and understood by all personnel involved, and all necessary steps should be taken to implement and maintain the policy.

(d) The general policy, whilst also satisfying additional national regulatory responsibilities, should in particular take into account:

(1) the provisions of the Aviation Code;

(2) the provisions of the applicable IR and their Acceptable Means of Compliance, certification specifications, and Guidance Material;

(3) the needs of industry; and

(4) the needs of the CAA.

(e) The policy should define specific objectives for key elements of the organization and processes for implementing related activities, including the corresponding control procedures and the measurement of the achieved standard.

AMC1 ADR.AR.B.005(a)(1) Management system

DOCUMENTED POLICIES AND PROCEDURES

(a) The various elements of the organization involved with the activities related to the applicable requirements of the Aviation Code and IR should be documented in order to establish a reference source for the establishment and maintenance of this organization.

(b) The documented policies and procedures should be established in a way that facilitates their use. They should be clearly identified, kept up to date, and made readily available to all personnel involved in the relevant activities.

(c) The documented policies and procedures should cover, as a minimum, the following aspects:

(1) policy and objectives;

(2) organization structure;

(3) responsibilities and associated authority;

(4) processes and procedures;

(5) internal and external interfaces;

(6) internal control procedures;

(7) training of personnel;

(8) cross references to associated documents; and

(9) assistance from other competent authorities (where required).

(d) The information is held in more than one document, or series of documents, and suitable cross-referencing should be provided. For example, organizational structure and job descriptions are not usually in the same documentation as the policies and the detailed working procedures. In such cases, it is recommended that the documented procedures include an index of cross references to all such other related information, and the related documentation should be readily available when required.

AMC2 ADR.AR.B.005(a)(1) Management system

DOCUMENTED POLICIES AND PROCEDURES

(a) The procedures in the CAA's management system should provide, at least, the following information:

(1) regarding continuing oversight functions undertaken by the CAA, the CAA organizational structure with description of the main processes. This information should demonstrate the allocation of responsibilities within the CAA, and that the CAA is capable of carrying out the full range of tasks regarding the size and complexity of the national aerodrome industry. It should, also, consider overall proficiency and authorization scope of CAA personnel;

(2) changes which significantly affect the CAA oversight capabilities;

(3) for personnel involved in oversight activities, the minimum professional qualification requirements and experience, and principles guiding appointment (e.g. assessment);

(4) how the following are carried out: assessing applications and evaluating compliance, issuance of certificates, performance of continuing oversight, follow-up of findings and observations, enforcement measures, and resolution of safety concerns;

(5) principles of managing exemptions, derogations, cases of equivalent level of safety, and special conditions;

(6) systems used to disseminate applicable safety information for timely reaction to a safety problem;

(7) criteria for planning continuing oversight (oversight programme), including adequate management of interfaces when conducting continuing oversight (aerodrome operations and ATS operations for example); and

(8) outline of the initial training of newly recruited oversight personnel (taking future activities into account), and the basic framework for continuation training of oversight personnel.

(b) The procedures in the CAA management system should include any amendments to these procedures

AMC1 ADR.AR.B.005(a)(2) Management System

TRAINING PROGRAMME AND RECURRENT TRAINING

(a) The CAA should establish a training programme for its personnel, including its aerodrome inspectors, and a plan for its implementation.

(b) The training programme should cover the specific needs of the personnel and the CAA.

(c) The training programme should include, as appropriate to the role, current knowledge, experience and skills of the personnel, at least the following:

(1) aviation legislation, organization , and structure;

(2) the Chicago Convention, relevant ICAO Annexes and documents, the applicable requirements of the Aviation Code, IR and related Acceptable Means of Compliance, certification specifications and Guidance Material, as well as assessment methodology of the alternative means of compliance, and other applicable national legislation;

(3) the applicable requirements and procedures;

(4) areas of particular interest that include, but are not limited to:

(i) management systems, including safety management systems, safety assurance principles, and quality and security management systems as applied to aeronautical data and aeronautical information;

(ii) acceptability and auditing of safety managements systems;

(iii) change management;

(iv) aeronautical studies, safety assessments, and reporting techniques;

(v) human factors principles;

(vi) aerodrome design;

(vii) signs, markings, and lighting;

(viii) aerodrome maintenance;

(ix) aerodrome operations, including:

(A) aerodrome safeguarding, including obstacle assessment;

(B) rescue and firefighting;

(C) emergency planning;

(D) disabled aircraft removal;

(E) low visibility operations;

(F) adverse weather operations;

(G) wildlife management;

(H) apron management and apron safety management;

(I) handling of dangerous goods; and

(J) fuel, facilities, storage and handling;

(x) evaluation, approval, and review of aerodrome manuals;

(xi) other suitable technical training appropriate to the role and tasks of the personnel; and

(xii) enforcement measures.

(5) The training programme and plan should be updated, as needed, to reflect, at least, changes in aviation legislation, and industry.

(6) The CAA should ensure that its personnel, including its aerodrome inspectors, undergo recurrent training at regular intervals defined by the CAA or whenever deemed necessary, in order to be kept up to date.

AMC2 ADR.AR.B.005(a)(2) Management system

QUALIFICATION AND TRAINING -AERODROME INSPECTORS

(a) Initial training should encompass:

(1) Initial theoretical training

The scope of the initial theoretical training is to familiarize the trainee aerodrome inspectors with the finding categorization, reporting, follow-up procedures, and enforcement. The primary scope of the theoretical training is not the transfer of technical knowledge as the trainees should possess such knowledge, either from previous work experience or through specialized training, prior to attending the theoretical course (for the areas to be covered in the training programme see AMC1 ADR.AR.B.005(a)(2)). Amongst others, the theoretical training should cover theory of audits and inspections, as well as quality/safety assurance.

(2) Practical training

The scope of practical training is to instruct on audit/inspection techniques and specific areas of attention without interference with the operation of the aerodrome activities.

The CAA should ensure that trainees have successfully completed the initial theoretical and practical training above by passing a relevant assessment.

(3) On-the-job training

The objective of the on-the-job training is to familiarize the trainees with the particularities of performing an aerodrome audit/inspection in a real, operational environment.

(a) Duration and conduct of the on-the-job training

The duration of the on-the-job training should be customized to the particular training needs of every trainee and cover, as much as possible, the audit/inspection items which the inspector will be privileged to inspect. The on-the-job training should include at least four aerodrome audits/ inspections.

(b) The scope and elements to be covered during the on-the-job training

(i) Preparation of an audit/inspection:

(A) sources of information for preparation of audit/inspection;

(B) areas of concern and/or open findings;

(C) selection of aerodrome/airport operator(s) to be audited/inspected; and

(D) task allocation among members of the audit/inspection team.

(ii) Administrative issues of the inspection:

(A) aerodrome inspector's credentials, rights, and obligations;

(B) aerodrome access procedures;

(C) safety and security airside procedures; and

(D) aerodrome inspector's toolkit (fluorescent vest, checklists, clinometer, distance measurement devices, digital camera, GPS, etc.).

(iii) Audit/Inspection:

(A) introduction — opening meeting;

(B) on-site activities (audit/inspection according to the area of expertise of the trainee);

(C) findings (identification, categorization, evidencing, reporting);and

(D) corrective actions — enforcement.

(iv) Closing meeting — debriefing on the audit/inspection conclusions

(v) Preparation, completion, and delivery of the audit/inspection report

(vi) Human factors elements:

(A) cultural aspects;

(B) resolution of disagreements and/or conflicts; and

(C) auditee stress.

(vii) Team leading if required

(viii) Post-audit/inspection procedures, such as monitoring the status of open audit findings, follow-up audits/inspections, and closing the findings after appropriate action has been taken by the aerodrome/airport operator.

(b) Assessment of trainee aerodrome inspectors

The assessment of the trainee should be done by the aerodrome inspector providing the training. A trainee should be considered to have successfully completed the on-the-job training only after demonstrating to the aerodrome inspector providing the training that he/she possesses the professional competence, knowledge, judgement, and ability to perform aerodrome inspections in an operational environment, in accordance with the applicable requirements.

(c) Aerodrome inspectors appointed to provide training and assessing trainees

The aerodrome inspectors providing the training, and assessing trainee aerodrome inspectors, should be appointed by the CAA and should meet the qualification criteria established by CAA. These criteria should require that the appointee has been a qualified aerodrome inspector (see GM6 ADR.AR.B.005(a)(2), for the last three years prior to his/her appointment. Additional factors to be considered when nominating aerodrome inspectors to provide training, and assess trainee aerodrome inspectors include: knowledge of training techniques, professionalism, maturity, judgment, integrity, safety awareness, communication skills, and personal standards of performance.

AMC3 ADR.AR.B.005(a)(2) Management system

QUALIFICATION OF AERODROME INSPECTORS AFTER SUCCESSFUL COMPLETION OF TRAINING

(a) Upon the successful completion of the initial training (initial theoretical training, practical training, and on-the-job training) the CAA should issue a formal qualification statement for each qualified aerodrome inspector listing their privileges. Credentials should also be issued for the aerodrome inspectors, to facilitate their work.

(b) The background knowledge and/or working experience of the aerodrome inspectors determines their privileges (the scope of their inspection; what they are entitled to inspect). The CAA should determine what the inspector is entitled to inspect taking into account the following considerations:

(1) background knowledge; and

(2) working experience.

(c) CAA should put in place a system that will ensure that their aerodrome inspectors meet at all times the qualification criteria with regard to the eligibility, training, and recent experience.

GM1 ADR.AR.B.005(a)(2) Management System

SUFFICIENT PERSONNEL

(a) This Guidance Material for the determination of the required personnel is limited to the performance of certification and oversight tasks, excluding personnel required to perform tasks subject to any national regulatory requirements.

(b) The elements to be considered when determining required personnel and planning their availability, may be divided into quantitative and qualitative elements:

(1) Quantitative elements:

(i) the number of initial certificates to be issued;

(ii) the number of aerodromes and aerodrome/airport operators certified by the CAA;

(iii) the number of providers of apron management services having declared their activity to the CAA;

(iv) the number of planned aerodrome audits and inspections; and

(v) the number of expected changes to the aerodrome infrastructure.

(2) Qualitative elements:

(i) the size, nature, and complexity of activities of aerodromes and aerodrome/airport operators, as well as providers of apron management services:

(A) privileges of the aerodrome/airport operator;

(B) type of approval, scope of approval;

(C) possible certification to industry standards;

(D) types of aerodromes operated;

(E) number of personnel; and

(F) organizational structure, existence of subsidiaries.

(ii) results of past oversight activities, including audits, inspections, and reviews, in terms of risks and regulatory compliance:

(A) number and level of findings; and

(B) implementation of corrective actions.

(iii) the size of the national aviation industry, and the potential growth of activities in the field of civil aviation, which may be an indication of the number of new applications and changes to existing certificates to be expected.

(c) Based on existing data from previous oversight planning cycles, and taking into account the situation within the national aviation industry, the CAA may estimate:

(1) the standard working time required for processing applications for certificates;

(2) the standard working time required for processing declarations;

(3) the number of new declarations, or changed declarations;

(4) the number of new certificates to be issued for each planning period; and

(5) the number of changes to existing certificates to be processed for each planning period.

(d) In line with the CAA oversight policy, the following planning data should be determined specifically for each aerodrome and aerodrome/airport operator, as well as for declared providers of apron management services:

(1) standard number of audits/inspections to be performed per oversight planning cycle;

(2) standard duration of each audit/inspection;

(3) standard working time for audit/inspection preparation, on-site audit/inspection, reporting and follow-up, per aerodrome inspector; and

(4) minimum number and required qualification of aerodrome inspectors for each audit/inspection.

(e) Standard working time could be expressed either in working hours per aerodrome inspector, or in working days per aerodrome inspector. All planning calculations should, then, be based on the same unit (hours or working days).

(f) It is recommended to use a spread sheet application to process data defined under (c) and (d) above, to assist in determining the total number of working hours/days per oversight planning cycle required for certification, oversight, and enforcement activities. This application could also serve as a basis for implementing a system for planning the availability of personnel.

(g) For each aerodrome, aerodrome/airport operator, and provider of apron management services, the number of working hours/days per planning period for each qualified aerodrome inspector that may be allocated for certification, oversight and enforcement activities should be determined, taking into account:

(1) purely administrative tasks not directly related to oversight and certification;

(2) training;

(3) participation in other projects;

(4) planned absence; and

(5) the need to include a reserve for unplanned tasks or unforeseeable events.

(h) The determination of working time available for certification, oversight, and enforcement activities should also consider the possible use of qualified ad-hoc contracted aerodrome inspectors.

(i) Based on the elements listed above, the CAA should be able to:

(1) monitor dates when audits and inspections are due, and when they have been carried out;

(2) implement a system to plan the availability of its personnel; and

(3) identify possible gaps between the number and qualification of its personnel, and the required volume of certification and oversight.

Care should be taken to keep planning data up to date, in line with changes in the underlying planning assumptions, with particular focus on risk-based oversight principles.

GM2 ADR.AR.B.005(a)(2) Management system

AERODROME INSPECTORS — DUTIES

(a) An aerodrome inspector is considered to be any person to whom the CAA has formally assigned tasks related to the safety oversight of aerodromes.

(b) Apart from the aerodrome oversight tasks, an aerodrome inspector may also undertake other tasks that the CAA finds necessary.

GM3 ADR.AR.B.005(a)(2) Management System

QUALIFICATION OF PERSONNEL

The term 'qualified' denotes fitness for the purpose. This may be achieved through fulfillment of the necessary conditions, such as completion of required training, or acquisition of a diploma or degree, or through the gaining of suitable experience. It also includes the ability, capacity, knowledge, or skill that matches or suits an occasion, or makes someone eligible for a duty, office, position, privilege, or status.

Certain posts may by nature be associated with the possession of certain qualifications in a specific field (e.g. rescue and firefighting, civil, mechanical, or electrical engineering, wildlife biology etc.). In such cases, the person occupying such a post is expected to possess the necessary qualifications at a level that is in accordance with the applicable national legislation.

GM4 ADR.AR.B.005(a)(2) Management system

QUALIFICATION AND TRAINING — GENERAL

(a) To ensure personnel remain competent, arrangements should be made for initial and recurrent training as required.

(b) With regard to sequence of particular components of initial training, the CAA should ensure that on-the-job training is undertaken only by trainees that have successfully completed the initial theoretical and practical training.

(c) The basic capability of the CAA personnel is a matter of recruitment, and normal management functions in selection of personnel for particular duties. Moreover, the CAA should provide training in the basic skills, as required for those duties. However, to avoid differences in understanding and interpretation, it is considered important that all personnel be provided with further training specifically related to the applicable requirements of the Aviation Code, IR and related AMC, CS and GM, as well as related to the assessment of AltMoC.

(d) The CAA provides training through qualified training source (e.g. training provided by other competent authorities or the EASA or ICAO or other training organizations).

(e) When training is not provided through an internal training organization, adequately experienced and qualified persons may act as trainers, provided their training skills have been assessed. If required, an individual training plan should be established covering specific training skills. Records should be kept of such training and of the assessment, as appropriate.

GM5 ADR.AR.B.005(a)(2) Management System

TRAINING PROGRAMME AND RECURRENT TRAINING

When preparing the training programme, the CAA should determine the areas for which the training may include realistic training elements.

As an example, the RFFS training could include parts of, or be the same with that of an aerodrome/airport operator's RFFS personnel. If an aerodrome/airport operator provides such training, care should be taken to avoid any possible conflict of interest.

GM6 ADR.AR.B.005(a)(2) Management system

RECENT EXPERIENCE REQUIREMENTS FOR AERODROME INSPECTORS

(a) An aerodrome inspector will remain qualified if he/she performs a minimum number of two aerodrome audits/inspections during the previous 12 months. In case the minimum numbers of audits/inspections are not achieved due to the number of aerodromes in the Republic of Moldova, audits/inspections conducted on other aerodromes which are open to public use, but do not fall within the scope of the Aviation Code and IR, may also be taken into account.

(b) If an aerodrome inspector loses his/her qualification as a result of not reaching the minimum number of inspections mentioned in paragraph (a), he/she may be re-qualified by the CAA by performing the number of the missed audits/inspections under the supervision of a qualified aerodrome inspector. The missed audits/inspections should take place within a maximum period of three months following the end of the period within which he/she should have reached the minimum number of audits/inspections.

(c) If an aerodrome inspector loses his/her qualification because he/she has not been engaged in performing audits/inspections for a period longer than that established in paragraph (a) but less than 24 months, he/she should be re-qualified by the CAA only after successfully completing the on-the-job-training, and any recurrent training required.

(d) If an aerodrome inspector loses his/her qualification because he/she has not been engaged in performing audits/inspections for more than 24 months, he/she should be fully re-qualified by the CAA only after successfully completing initial theoretical, practical, and on-the-job training.

GM1 ADR.AR.B.005(a)(3) Management system

FACILITIES AND OFFICE ACCOMODATION

Facilities and office accommodation include but are not limited to:

(a) adequate offices;

(b) a technical library available for the CAA personnel, or another method to ensure receipt, control, and distribution of necessary technical documentation;

(c) office equipment, including computers and communication means;

(d) transportation means;

(e) personnel protective equipment; and

(f) equipment necessary for auditing/inspecting the aerodrome and its facilities, such as cameras, clinometers, distance measurement devices, GPS etc.

AMC1 ADR.AR.B.005(a)(4) Management system

COMPLIANCE MONITORING PROCESS

The formal process to monitor compliance of the management system with the relevant requirements, and the adequacy of the procedures should:

(a) include a feedback system of audit findings to ensure implementation of corrective actions as necessary; and

(b) be the responsibility of a person, or group of persons who should be responsible to the senior management of the CAA and who perform compliance monitoring activities with functional independence from the units/ departments they oversee and with direct access to the senior management of the CAA and to appropriate management for safety matters.

AMC1 ADR.AR.B.005(c) Management System

COORDINATION WITH OTHER AUTHORITIES

Note. - *Applicable until 2 November 2022*

[According to Order no. 44/GEN from 21.10.2020]

The CAA should establish coordination arrangements with other authorities of the RM. Such coordination arrangements should, in particular, include the following authorities:

(a) security agencies, in order to ensure:

(1) international civil aviation security measures are integrated into the design and construction of aerodromes, and their facilities; and

(2) the optimization of civil aviation security measures.

(b) environmental protection authorities, for the management of conflicts between safety and environmental requirements;

(c) local planning and land use authorities.

AMC1 ADR.AR.B.020(a) Record-keeping

GENERAL

(a) The record-keeping system should ensure that all records are accessible whenever needed within a reasonable time. These records should be organized in a way that ensures traceability and retrievability throughout the required retention period.

(b) Records should be kept in paper form, or in electronic format, or a combination of both media. Records stored on microfilm or optical disc form are also acceptable. The records should remain legible and accessible throughout the required retention period. The retention period starts when the record has been created or last amended.

(c) Computer systems should have, at least, one backup system which should be updated within 24 hours of any new entry. Computer systems should include safeguards against unauthorized alteration of data.

(d) All computer hardware used to ensure data backup should be stored in a different location from that containing the working data, and in an environment that ensures they remain in good condition. When hardware or software changes take place, special care should be taken that all necessary data continue to be accessible, at least, through the full period specified in ADR.AR.B.020(c) and (d).

AMC1 ADR.AR.B.020(a)(1);(a)(2);(a)(3) Record-keeping

CAA MANAGEMENT SYSTEM

Records related to the CAA management system should include, as a minimum, and as applicable:

(a) the documented policies and procedures;

(b) the personnel files of CAA personnel, with supporting documents related to their training and qualifications;

(c) the results of the CAA internal compliance monitoring and risk assessment, including audit findings and corrective actions.

AMC1 ADR.AR.B.020(a)(2) Record keeping

DURATION OF RETENTION PERIOD OF RECORDS

Records related to the training and qualification of the personnel of the CAA should be kept until the end of their employment.

AMC1 ADR.AR.B.020(a)(4);(a)(5) Record keeping

AERODROMES — AERODROME/AIRPORT OPERATORS — APRON MANAGEMENT SERVICE PROVIDERS

Records related to a certified aerodrome and its aerodrome/airport operator, or the provider of apron management services having declared its activity to the CAA should include, as appropriate to the type of organization :

(a) the application for a certificate, approval, or declaration;

(b) the documentation based upon which:

  (1) the certificate or an approval has been granted with amendments; and

  (2) the declaration has been registered;

(c) the documentation related to notifications of changes by the applicant and their assessment;

(d) the certificate or approval issued, including any changes;

(e) a copy of the continuing oversight programme listing the dates when audits are due and when such audits were carried out;

(f) continuing oversight records, including all audit and inspection records;

(g) copies of all relevant correspondence;

(h) details of any exemption or derogation, and enforcement actions;

(i) any report from other competent authorities relating to the oversight of the aerodrome, the aerodrome/airport operator, and the provider of apron management services, if applicable; and

(j) a copy of any other document approved by the CAA.

AMC1 ADR.AR.B.020(c) Record keeping

AERODROMES — AERODROME/AIRPORT OPERATORS — PROVIDERS OF APRON MANAGEMENT SERVICES

(a) Records which are considered to be related to the certification of an aerodrome, and to be maintained for the lifespan of the certificate include, but are not limited to, the following:

  (1) applications submitted;

  (2) notifications of the certification specifications for an initial certification and any changes thereof, including:

    (i) any provisions for which an equivalent level of safety has been accepted; and

    (ii) any special conditions.

  (3) documentation related to alternative means of compliance used;

  (4) documentation related to Deviation Acceptance and Action Documents (DAAD) if relevant;

  (5) documentation related to exemptions or derogations granted;

  (6) aeronautical studies and safety assessments;

  (7) designs of the aerodrome;

(8) declarations made by the applicant;

(9) current version of an aerodrome manual, and evidence of its evaluation; and

(10) approvals granted.

(b) Records for aerodrome equipment, or parts of the aerodrome infrastructure which have been removed from the aerodrome need not be maintained.

(c) For providers of apron management services, records include, but may not be limited to, the declarations, and the relevant documentation submitted by the providers.

GM1 ADR.AR.B.020 Record keeping

GENERAL

Records are required to document results achieved, or to provide evidence of activities performed. Records become factual when recorded. Therefore, they are not subject to version control. Even when a new record is produced covering the same issue, the previous record remains valid.

GM1 ADR.AR.B.020(a) Record keeping

MICROFILM AND OPTICAL STORAGE

Microfilming or optical storage of records may be carried out at any time. The records should be as legible as the original record, and remain so for the required retention period.

GM2 ADR.AR.B.020(a) Record keeping

AERODROMES — AERODROME/AIRPORT OPERATORS — DOCUMENTATION

Documentation to be kept as records in support of the certificate or approval includes the management system documentation, including any technical manuals, such as the aerodrome manual, that have been submitted with the initial application, and any amendments to these documents.

SUBPART C — OVERSIGHT, CERTIFICATION AND ENFORCEMENT (ADR.AR.C)

AMC1 ADR.AR.C.005 Oversight

GENERAL

(a) The CAA should assess the aerodrome/airport operator, and monitor its continued competence to conduct safe operations in compliance with the applicable requirements and the certification basis. Similarly, the CAA should monitor the continued competence of providers of apron management services. The CAA should ensure that accountability for assessing and monitoring aerodrome/airport operators, as well as providers of apron management services, is clearly defined.

(b) It is essential that the CAA has the full capability to adequately assess the continued competence of an aerodrome/airport operator, or a provider of apron management services by ensuring that the whole range of activities is assessed by appropriately qualified personnel.

GM1 ADR.AR.C.005 Oversight

GENERAL

(a) Responsibility for the safe operation of an aerodrome lies with the aerodrome/airport operator. Under these provisions, a positive move is made towards devolving upon the aerodrome/airport operator a share of the responsibility for monitoring the safety of operations. The objective cannot be attained unless aerodrome/airport operators are prepared to accept the implications of this policy, including that of committing the necessary resources to its implementation. Crucial to success of the policy is the content of ADR.OR which requires the establishment of a management system by the aerodrome/airport operator.

(b) The CAA should continue to assess the aerodrome/airport operator's or apron management service provider's compliance with the applicable requirements, including the effectiveness of its management system. If their management system is judged to have failed in its effectiveness, then this in itself is a breach of the requirements which may, among others, call into question the validity of the certificate or declaration, if applicable.

(c) The accountable manager is accountable to the CAA as well as to those who may appoint him/her. It follows that the CAA cannot accept a situation in which the accountable manager is denied sufficient funds, manpower, or influence to rectify deficiencies identified by the management system.

AMC1 ADR.AR.C.010 Oversight programme

PROCEDURES FOR OVERSIGHT OF AERODROME OPERATORS AND PROVIDERS OF APRON MANAGEMENT SERVICES

(a) The CAA should assign an appropriate focal point for each aerodrome operator, and each provider of apron management services. Where more than one aerodrome inspector is assigned to an aerodrome/airport operator, one of them should be nominated as having overall responsibility for supervision of, and liaison with the aerodrome/airport operator's management, and be responsible for reporting on compliance with the requirements for its operations as a whole.

(b) Inspections, audits, and oversight procedures, on a scale and frequency appropriate to the operation, should include, but not be limited to, items from the following list:

(1) aerodrome infrastructure and equipment;

(2) visual aids and aerodrome electrical systems;

(3) obstacle restriction and control;

(4) aerodrome data reporting;
(5) aerodrome emergency planning;
(6) rescue and firefighting;
(7) removal of disabled aircraft;
(8) storage facilities and handling of dangerous goods and fuel, including fuel installations, fuel quality, and fuelling equipment;
(9) low visibility operations;
(10) winter and adverse weather operations;
(11) protection of radar, navigation aids, and other aerodrome equipment;
(12) apron management;
(13) apron safety management;
(14) vehicle control on the movement area;
(15) wildlife hazard management;
(16) runway excursion and incursion prevention programmes of the aerodrome/airport operator, as part of the CAA runway safety programme;
(17) inspections of the movement area;
(18) maintenance of the aerodrome systems and the movement area;
(19) aerodrome works;
(20) protection against hazardous activities in the aerodrome surroundings;
(21) personnel training and records, including review of training programme on runway excursion and incursion prevention and its implementation;
(22) aerodrome manuals and documentation;
(23) operator's management system, including its safety management system and its quality, and security management system for aeronautical data; and
(24) operator's oversight of the compliance of the organizations operating, or providing services at the aerodrome (third parties).

(c) An inspection or an audit should be a 'deep cut' through the items selected, and all findings and observations should be recorded.

(d) Aerodrome inspectors should analyze and assess the root cause(s) identified by the aerodrome/airport operator, and be satisfied that the corrective actions taken are adequate to correct the non-compliance, and to prevent reoccurrence.

(e) Inspections and audits may be conducted separately or in combination. Inspections and audits may also be coordinated with inspections and audits conducted by other CAA subdivisions, to address areas of coordination between aerodrome/airport operator and the providers of other services (e.g. ATM/ANS). Joint audits with other subdivisions of the CAA for other areas should also be performed because they are particularly effective to examine the interfaces between different actors at the aerodrome (e.g. airport and ATC), including the prevention of runway excursions and incursions.

(f) Inspections may, at the discretion of the CAA, be conducted with or without prior notice to the aerodrome/airport operator, or the provider of apron management services.

(g) Where it is apparent to an aerodrome inspector that an aerodrome/airport operator, or a provider of apron management services has permitted a breach of the applicable requirements, with the result that safety has been, or might have been compromised, the inspector should ensure that the responsible person within the CAA is informed without delay.

(h) In the first few months of a new operation, physical change of the aerodrome or organizational restructure, aerodrome inspectors should be particularly alert to any irregular procedures, evidence of inadequate facilities or equipment, or indications that management control of the operation may be ineffective.

(i) Aerodrome inspectors should take account of any conditions that may indicate a significant deterioration in the operator's financial situation. When any financial difficulties are identified, aerodrome inspectors should increase technical surveillance of the operation with particular emphasis on the upholding of safety standards.

(j) The number or the magnitude of the non-compliances identified by the CAA will serve to support the CAA continuing confidence in the aerodrome/airport operator's, or the of apron management services provider's competence, or, alternatively, may lead to an erosion of that confidence. In the latter case, the CAA will need to review any identifiable shortcomings of the management system, and take appropriate action if required.

GM1 ADR.AR.C.010 Oversight programme

PROCEDURES FOR OVERSIGHT OF AERODROME/AIRPORT OPERATORS AND PROVIDERS OF APRON MANAGEMENT SERVICES

In addition to its regulatory oversight the CAA may establish national groups for the prevention of runway excursions and incursions as part of a national Runway Safety Steering Group. Membership of the groups could include representatives from industry such as aerodromes, aircraft operators, air traffic services, industry safety groups, (local) runway safety committee members and appropriate representatives from the CAA.

The terms of reference for such a group might be to:

- Address specific hazards, identified nationally, coordinating this through sub-groups or external agencies as required;
- Promote good practice, information sharing and raise awareness through publicity and educate industry;
- Actively enhance work continuing in industry;
- Act as coordination point for industry;
- Identify and investigate which technologies are available that may reduce runway excursion and incursion risks;
- Review current aerodrome, ATC and aircraft operational policies and if necessary make recommendations on future policy to reduce the risk of runway excursions and incursions;
- Make recommendations for guidance and advisory material for industry on aerodrome, aircraft and ATC operational issues to reduce the risk of runway excursions and incursions;
- Oversee and promote the reporting of runway excursions and runway incursions incidents;
- Ensure the thorough analysis of data to identify and examine specific areas of concern.

AMC1 ADR.AR.C.010(b) Oversight programme

AUDIT

(a) The oversight programme should indicate which aspects will be covered with each audit.

(b) Part of an audit should concentrate on the aerodrome/airport operator's compliance monitoring reports to determine if the aerodrome/airport operator is identifying the root causes and correcting its problems.

(c) At the conclusion of the audit, an audit report should be completed by the auditing aerodrome inspector, including all findings raised.

AMC1 ADR.AR.C.010(b);(c) Oversight programme

OVERSIGHT PLANNING CYCLE

(a) The safety performance should be continuously monitored in order to ensure that the oversight programme and the applicable oversight planning cycle remain appropriate.

(b) The oversight planning cycle and related oversight programme for each aerodrome/airport operator should be reviewed annually.

(c) The oversight planning cycle and related oversight programme, and their annual review should be determined according to the following elements:

(1) the results of past certification and oversight activities;

(2) capability to effectively identify aviation safety hazards, and manage the associated risks;

(3) effective control over all changes in accordance with ADR.OR.B.040;

(4) absence of level 1 findings;

(5) response time to implement corrective actions requested by the CAA in accordance with ADR.AR.C.055(d)(2); and

(6) risk exposure related to the aerodrome operated, such as traffic volume, type of aircraft or physical characteristics of the aerodrome.

(d) During each oversight planning cycle, the CAA should convene meetings with the accountable manager of the aerodrome/airport operator, or his/her delegate.

AMC2 ADR.AR.C.010(b);(c) Oversight programme

OVERSIGHT PLANNING CYCLE

(a) For each aerodrome/airport operator certified by the CAA all processes should be audited at periods not exceeding the applicable oversight planning cycle. The beginning of the first oversight planning cycle is normally determined by the date of issue of the first certificate. If the CAA wishes to align the oversight planning cycle with the calendar year, it should shorten the first oversight planning cycle accordingly.

(b) The interval between two audits for a particular process should not exceed the interval of the applicable oversight planning cycle.

(c) Audits should include at least one on-site audit within each oversight planning cycle at each aerodrome.

GM1 ADR.AR.C.010(b) Oversight programme

INDUSTRY STANDARDS

(a) For aerodrome/airport operators having demonstrated compliance with industry standards, the CAA may adapt its oversight programme, in order to avoid duplication of specific audit items.

(b) Demonstrated compliance with industry standards may not be considered in isolation from the other elements to be considered for the CAA risk-based oversight.

(c) In order to be able to credit any audits performed as part of certification in accordance with industry standards, the following should be considered:

(1) the demonstration of compliance is based on certification auditing schemes providing for independent and systematic verification;

(2) certification audits are relevant to the requirements defined in ADR.OR, ADR.OPS, or other regulations as applicable;

(3) the scope of such certification audits can easily be mapped against the scope of oversight;

(4) audit results are accessible to the CAA; and

(5) the audit planning intervals are compatible with the oversight planning cycle.

GM2 ADR.AR.C.010(b) Oversight programme

FINANCIAL SITUATION

Examples of trends which may indicate problems in a new aerodrome/airport operator's financial situation could be:

(a) significant lay-offs or turnover of personnel; reduced staff resource; increased multi-tasking; changing shift patterns; and increased overtime;

(b) delays in meeting payroll;

(c) reduction of safe operating standards;

(d) decreasing standards of training;

(e) withdrawal of credit by suppliers;

(f) inadequate maintenance of the aerodrome; and

(g) shortage of supplies and spare parts.

GM3 ADR.AR.C.010(b) Oversight programme

PROCEDURES FOR OVERSIGHT OF AERODROME/AIRPORT OPERATORS AND PROVIDERS OF APRON MANAGEMENT SERVICES

Normally the inspections that are carried out by the CAA should be with prior notice to the aerodrome/airport operator or the provider apron management services.

Such notice should be given in writing, and in good time before the inspection so that the inspected entity can make all the necessary arrangements and preparations, and to avoid the disruption of normal operations.

In case an inspection is conducted without prior notice (unannounced inspection), the aerodrome inspectors should ensure that the operations are affected to the minimum extent possible.

AMC1 ADR.AR.C.015(a) Initiation of the certification process

PROCESSING OF APPLICATION

Upon receipt of an application, the CAA should acknowledge receipt of that application, in writing, within the period defined in the applicable national legislation.

If the CAA foresees a delay in processing the application, it should notify the applicant as soon as possible, and within the period defined in the applicable national legislation.

The CAA should respond to any request made by the applicant within the period defined in the applicable national legislation.

If an applicant fails to submit all necessary documentation, the CAA should inform him/her in writing, within the period defined in the applicable national legislation.

AMC1 ADR.AR.C.015(c) Initiation of the certification process

ESTABLISHEMENT AND NOTIFICATION OF CERTIFICATION BASIS — DETERMINATION OF ELEVATION OF AERONAUTICAL BEACONS

If such beacons are operationally necessary, the CAA should ensure that the elevation which is sufficient for the vertical light distribution of an aerodrome beacon or an identification beacon, as described in CS ADR-DSN.M.620, is determined.

AMC2 ADR.AR.C.015(c) Initiation of the certification process

ESTABLISHMENT AND NOTIFICATION OF THE CERTIFICATION BASIS

(a) Upon receipt of the application, the CAA should examine and assess the content of the application and the related documentation, including the proposed certification specifications and any provisions for which compliance is proposed to be demonstrated in a different way that provides for an equivalent level of safety. (See also paragraph (a)(2) of AMC1 ADR.AR.C.035(c)).

(b) The CAA should establish the certification basis of the aerodrome in accordance with ADR.AR.C.020;

(c) The CAA should document and notify the applicant of:

(1) the certification basis as established in paragraph (b) above; and

(2) any change thereto, as a result of certification specifications which became effective after the notification of the certification basis and which the applicant decided to comply with, or that the CAA has found necessary to be complied with, or design changes made, compliance demonstration results, new special conditions that the CAA considers necessary, etc.

(d) In addition, the CAA should assess the documentation demonstrating the way the applicant is proposing to comply with the applicable requirements of the Aviation Code, ADR.OR, and ADR.OPS, and any other applicable requirements that are matching the aerodrome design and its operation.

(e) When notifying the applicant in accordance with paragraph (c), the CAA should also inform him/her of the right of appeal, as exists under the applicable national legislation.

GM1 ADR.AR.C.015 Initiation of the certification process

INITIAL INTEREST

Prior to initiating the application process for a certificate, the CAA should arrange for a meeting with the applicant.

During this meeting, the applicant should present to the CAA its plans with regard to the aerodrome. The applicant should also make arrangements so that its key personnel are present during this meeting.

In addition, during this meeting, the CAA should provide general information to the applicant about the applicable requirements for the aerodrome. It should also provide copies of the applicable requirements, application forms, and any other relevant documentation, and describe the procedures that are followed during the certification process.

Such information to be provided by the CAA may also include information about approvals, permits, or clearances that the applicant may need to obtain from other competent authorities (such as security or environmental protection competent authorities, local planning authorities, etc.) prior or during the certification process.

The CAA should make arrangements so that representatives of all involved entities and of involved CAA subdivisions are present during this meeting.

GM1 ADR.AR.C.015(b) Initiation of the certification process

CERTIFICATION OF EXISTING AERODROMES

The certification period of an existing aerodrome should not exceed 18 months from the filing of the application by the applicant to the granting of the certificate.

GM1 ADR.AR.C.015(c) Initiation of the certification process

ESTABLISHMENT AND NOTIFICATION OF THE CERTIFICATION BASIS

Establishing the certification basis means that at the start of which the applicant proposes the certification specifications applicable to the aerodrome, the CAA finalizes the set of all applicable certification specifications. This means that it may change and also add additional

applicable certification specifications to the applicant's proposal; this is typically an iterative process.

AMC1 ADR.AR.C.020(a) Certification Basis

EFFECTIVE CERTIFICATION SPECIFICATIONS

(a) The certification specifications that the CAA should use to establish and notify the certification basis to the applicant, should be those that were effective during the date of the application.

(b) Notwithstanding paragraph (a) above, if at any point of the certification process the applicant requests to use certification specifications which came into force after the filing of his/her application, or the notification of the certification basis by the CAA, then the CAA should examine if it is necessary to also include in the certification basis other certification specifications, which also came into effect after the filling of the initial application and which are, in the opinion of the CAA, directly related to those certification specifications that have been proposed by the applicant.

(c) Notwithstanding paragraph (a) and (b) above, the CAA may at any time, after the filing of the application, decide to include in the certification basis any certification specifications that it deems necessary.

AMC1 ADR.AR.C.020(b);(c) Certification Basis

CASES OF EQUIVALENT LEVEL OF SAFETY AND SPECIAL CONDITIONS

When deciding on cases of equivalent safety or special conditions and their respective underpinning justification material, the CAA may consider whether any of the applicable certification specifications compares to a Standard or a Recommended Practice and their different implications foreseen by the ICAO Convention and its Annexes.

GM1 ADR.AR.C.020(b) Certification basis

CERTIFICATION BASIS — PROPOSALS FOR EQUIVALENT LEVEL OF SAFETY

When the CAA assesses a proposal of an applicant who has requested to demonstrate an equivalent level of safety, the CAA should pay, amongst others, particular attention to:

(a) the identification of the intent of the CAA's certification specifications in question, and assess if the proposal satisfies that intent;

(b) any possible interconnections/relationships between the CAA's certification specifications which the proposal is related to, with any other certification specifications or requirements, in order to:

(1) identify any implications of the proposal to other design, operational, human, or other elements of the system; and

(2) establish if such interconnections/relationships and implications have been properly and adequately addressed by the applicant.

The applicant's proposal may involve design, technical, procedural, or other suitable means.

The demonstration of an equivalent level of safety may involve various methodologies, quantitative or qualitative, whose magnitude and complexity may vary, depending on each case.

In any case, the applicant should demonstrate to the satisfaction of the CAA that the proposed solution offers a level of safety, which is effectively not lower than that associated with the relevant CAA certification specifications.

GM1 ADR.AR.C.035(a) Issuance of certificates

NOMINATED PERSONS

When an aerodrome/airport operator submits the name of a nominee for the nominated persons (see ADR.OR.D.015), the CAA should accept them by assessing his/her qualifications and may interview the nominee or call for additional evidence of his/her suitability.

GM2 ADR.AR.C.035(a) Issuance of certificates

NOMINATED PERSONS - INTERVIEW WITH THE APPOINTED ACCOUNTABLE MANAGER, AND NOMINATED PERSONS

Possible cases where an interview/meeting with nominated persons may be necessary are amongst others:

(a) start of operations before issuing a first certificate for an aerodrome; and

(b) change of nominated persons at an aerodrome already certified.

Purpose of the meeting

The aim of the interview and exchange of information between the intended nominated persons and the CAA is, for the latter to acquire information on the intended work areas of the nominated persons and their respective competence level so as to verify their suitability for the posts.

The purpose of the information exchange is to create good contact and understanding between the both parties, and to come to a mutual conclusion on, if necessary, possible solutions for training and personal development over time.

Possible agenda items:

(a) information from the CAA on organization and mission of the CAA, the regulatory framework, and specifically Safety Management System requirements;

(b) information from the nominated person concerning the intended work area;

(c) enforcement methodology of the CAA;

(d) the role and responsibility of the accountable manager/operational services manager/maintenance manager/ safety manager or other nominated persons;

(e) expected competence requirement of the nominated person in relation to present personal status and experience presented in a CV or equivalent documentation;

(f) interview/discussion concerning depth of knowledge, and understanding of the applicable legislation;

(g) the role and responsibility of the CAA and of the nominated person;

(h) understanding of aviation in general and for the specific nominated post, how operators/activities at the aerodrome including Air Navigation Service Providers, and other aviation activities can impact aircraft safety; and

(i) distribution of delegated powers depending on the organizational situation.

GM3 ADR.AR.C.035(a) Issuance of certificates

EVALUATION OF SAFETY ASSESSEMENTS PROVIDED BY THE AERODROME/AIRPORT OPERATOR AT THE INITIAL CERTIFICATION OR ACCOMPANYING A REQUEST FOR PRIOR APPROVAL OF A CHANGE IN ACCORDANCE WITH ADR.OR.B.040.

(a) The CAA should evaluate the conclusion of a submitted safety assessment provided by the aerodrome/airport operator to ensure compliance with the relevant requirement for the operator on how to assess changes under ADR.OR.B.040(f).

(b) The CAA should evaluate the safety assessment and, in particular, make sure that:

(1) the identified safety concern(s) has (have) been assessed through the safety assessment process and is (are) adequately documented.

(2) an appropriate coordination has been performed between the parties affected by the safety concern(s);

(3) the assessment covers the whole system and the interactions of its elements;

(4) the hazards have been properly identified and the level of risk assessed;

(5) the proposed mitigation measures are adequate and consistent with the objective of reducing the identified level of risk and the safety objectives, if relevant;

(6) the timeframes of the planned implementation of the proposed associated actions are appropriate.

(c) After its evaluation, the CAA should either:

(1) agree to the proposed associated actions, such as mitigation measures; or

(2) coordinate with the aerodrome/airport operator to reach an agreement on revised mitigation measures if some risks have been underestimated, or have not been identified; or

(3) impose additional measures; or

(4) reject the proposal if no agreement can be reached.

(d) The CAA should define and undertake oversight actions that ensure that mitigation and/or additional measures are properly implemented so that the measures actually meet the risk reduction objectives, and that the planned timeframes are applied.

(e) When necessary, the CAA should require the aerodrome/airport operator to promulgate appropriate information, for use by the aerodrome organization, various stakeholders, and notably by the air navigation service providers and aircraft operators.

GM1 ADR.AR.C.035(b)(1) Issuance of certificates

MODEL FOR THE SINGLE AERODROME/AIRPORT CERTIFICATE

REPUBLIC OF MOLDOVA

CERTIFICATE

Certificate reference: **MD-XXX**
Pursuant to the Aviation Code of the Republic of Moldova no. 301/2017 and Government decision no.653/2018 on approval of the Regulation regarding administrative procedures related to aerodromes for the time being in force and subject to the conditions specified below,
the Civil Aviation Authority hereby certifies that:

[*COMPANY NAME AND ADDRESS*]

is authorized to operate aerodrome [*NAME OF AERODROME*], in accordance with the provisions of the Aviation Code of the Republic of Moldova and Implementing Rules, the aerodrome certification basis, the terms of the certificate and the aerodrome manual.

This certificate remains valid for 2 years unless it is surrendered or revoked

Date issue: **YYYY / MM / DD**
Revision No: **XX**

For the CAA

YYYY/MM/DD		
Data	*Signature*	*Director CAA*

REVALIDATION

No.	Period		Authorized signature
	from	till	
1.			Stamp _____
2.			Stamp _____
3.			Stamp _____
4.			Stamp _____
5.			Stamp _____
6.			Stamp _____

AMC1 ADR.AR.C.035(c) Issuance of certificates

VERIFICATION OF COMPLIANCE

(a) Upon receipt of an application for a certificate, the CAA should:

(1) nominate an individual to become the focal point for all aspects of the applicant's certification process, and to coordinate all necessary activities, including the CAA certification team. The nominated person should be responsible to the responsible person of the CAA for confirming that all appropriate inspections and audits have been carried out. He/she should also ensure that the necessary prior approvals required are issued in due course;

(2) verify if the application shows compliance with the applicable requirements. The CAA should also arrange for the steps to be followed during the certification process. This would, normally, start with the demonstration of compliance of the aerodrome with the established and notified certification basis (see AMC2 ADR.AR.C.015(c)) which will require the conduct of technical inspections by the CAA and/or examination of submitted documentation, the participation to demonstrations, or tests conducted by the applicant, as the case may be, and the CAA determines appropriate. This should also include the cases where the certification basis includes provisions for which the CAA has accepted the applicant to demonstrate an equivalent level of safety to, or cases of special conditions, as applicable;

If the CAA is not satisfied with the outcome of the demonstration process for any elements of the certification basis, it should notify the applicant in writing. At the end of this phase, the CAA should have documented evidence that the aerodrome meets the notified certification basis;

(3) review the aerodrome manual, which should be prepared in accordance with ADR.OR.D.005, and any other documentation provided by the applicant; and

(4) verify compliance with the applicable requirements of ADR.OR, ADR.OPS, as well as any other applicable requirement. When verifying compliance with such requirements, an audit should be conducted covering the following areas:

(i) compliance shown by the applicant with the applicable requirements of ADR.OPS, or any other applicable requirements;

(ii) the applicant's management system and its organization, including: detailed management structure, including names and qualifications of nominated personnel; adequacy of the organization and management structure, including allocated resources and numbers of personnel allocated by the applicant to key management tasks and other positions. Care should be taken to verify that the system is comprehensive, and is likely to be effective. Of particular importance is a careful review of the qualifications of the applicant's nominated persons. Account should be taken of the relevance of the nominee's previous experience and known record;

(iii) safety management and compliance monitoring with applicable requirements;

(iv) documentation on which the certificate should be granted (organization documentation as required by ADR.OR, including technical manuals, such as the aerodrome manual etc.); and

(v) adequacy of facilities with regard to the applicant's scope of work.

(5) in case of non-compliance, the applicant should be informed, in writing, of the corrections or supplements which are required.

(b) The CAA should be satisfied with the demonstration of compliance of the aerodrome manual with the requirements referred to in ADR.OR.E.005 and the related AMCs.

(c) The CAA should ensure that standardized and approved methods and tools are used by its personnel during the process described in paragraph a.

(d) In cases where an application for a certificate is refused, the applicant should be informed of the right of appeal existing under national regulations.

(e) Prior to issuing the certificate, the CAA may require the conduct of one or more flights at the aerodrome, as well as any other test, or exercise it finds necessary.

(f) When the verification process is complete, the CAA should issue the certificate and ensure the publication of the certification status of the aerodrome in the Aeronautical Information Publication (AIP) Moldova.

GM1 ADR.AR.C.035(c) Issuance of certificates

VERIFICATION OF COMPLIANCE

The technical inspections of the aerodrome should take place prior to the CAA finding the aerodrome manual satisfactory in accordance with ADR.OR.E.005.

AMC1 ADR.AR.C.035(d) Issuance of certificates

OPERATING CONDITIONS OR LIMITATIONS

(a) If, during the certification process, an operating condition or a limitation has been determined as necessary to be imposed on or implemented at the aerodrome, the CAA should ensure that such limitation or procedure is also included in the aerodrome manual.

(b) The CAA should also ensure that the aerodrome manual contains all limitations, or any other similar information prescribed in the certification specifications included in the certification basis of the aerodrome.

AMC2 ADR.AR.C.035(d) Issuance of certificates

OPERATING CONDITIONS OR LIMITATIONS

(a) Operating conditions and limitations, such as noise mitigation or abatement procedures, should not increase, but should seek to reduce where possible, the risk of runway incursions and excursions.

(b) Operating conditions and limitations should undergo a safety risk assessment to determine if they may adversely affect runway incursion and excursion risk levels.

GM1 ADR.AR.C.035(d) Issuance of certificates

SCOPE OF AIRCRAFT OPERATIONS WITH A HIGHER AERODROME REFERENCE CODE LETTER

Any restrictions or mitigation measures for the use of aircraft type/s at the aerodrome should only be mentioned in the aerodrome manual. Notably any limitations arising from the assessment to be undertaken for the use of the aerodrome by higher code letter aircraft according to ADR.OPS.B.090 should be included there.

GM1 ADR.AR.C.035(e) Issuance of certificates

MODEL FOR THE TERMS OF THE CERTIFICATE TO BE ATTACHED TO THE CERTIFICATE

TERMS OF THE CERTIFICATE	
Certificate reference: [STATE CODE][1]:	MD
Aerodrome name — ICAO location indicator [2]:	
Conditions to operate[3]:	
Runway — declared distances[4]:	
Types of approaches[5]:	
Aerodrome reference code[6]:	
Scope of aircraft operations with a higher aerodrome reference code letter[7]:	
Provision of apron management services [8]:	
Rescue and firefighting level of protection[9]:	
Other[10] :	

1 The certificate must be given the State Code [The two-letter code should be used. For the Republic of Moldova the State Code is MD] and a unique ascending number. Example: MD – 01.

2 To be specified: the official name of the aerodrome and the ICAO location indicator for the aerodrome.

3 To be specified: day/ night and IFR/ VFR.

4 To be specified: ASDA, LDA, TODA, TORA in metres for each direction of each runway, including intersection take-off if applicable.

5 To be specified: approval of the runway for non-instrument, instrument, non-precision approach. In case of precision approach (-es) it is to be indicated, which of the following precision approach (-es) is (are) approved:
- *— Standard Category I;*
- *— Lower than Standard Category I;*
- *— Precision Approach Category II;*
- *— Other than Standard Category II;*
- *— Precision Approach Category III-A;*
- *— Precision Approach Category III-B;*
- *— Precision Approach Category III-C.*

6 To be specified: Aerodrome Reference Code (Code number/Code letter).

7 To be specified: the approved type of aeroplanes with a higher code letter than indicated in point 6 above.

8 To be specified: the name of the service provider, both in case such services are provided or are not provided by the aerodrome operator.

9 To be specified: the rescue and firefighting level of protection as per Annex 3 (ADR.OPS) to the IR..

10 To be specified: any other information that the CAA finds necessary to include.

AMC1 ADR.AR.C.035(h) Issuance of certificates

APPROVAL OF THE PROCEDURE FOR THE MANAGEMENT AND NOTIFICATION OF CHANGES

The CAA should establish and document its process to be followed by the aerodrome inspectors when assessing the scope of the changes in the procedure proposed by the aerodrome/airport operator to be followed for the management and notification of the changes. Criteria to be used include, but are not limited to:

(a) frequency of changes;

(b) magnitude of changes;

(c) complexity of the aerodrome and type of operations;

(d) density of traffic at the aerodrome;

(e) time required to assess the documentation of the changes notified by the aerodrome operator;

(f) reasonable reaction times in relation to types of changes for the CAA to object to a notification;

(g) need for the timely publication of the changes and their notification by the AIRAC system;

(h) previous conduct of the aerodrome/airport operator; and

(i) effectiveness of the safety management system of the aerodrome/airport operator.

AMC1 ADR.AR.C.040(a) Changes

EFFECTIVE CERTIFICATION SPECIFICATIONS FOR CHANGES

(a) The certification specifications that the CAA should use to assess the application for or the notification of a change, should be those which were effective on the date of the notification of the change by the aerodrome/airport operator.

(b) Notwithstanding paragraph (a) above, at any point of the process the aerodrome/airport operator may request to use certification specifications that came into force after the filing of the application for, or notification of a change. In such cases, the CAA should examine if it is necessary to also notify the aerodrome/airport operator of other certification specifications, which also came into effect after the date of the application for, or the notification of the change by the aerodrome operator, and which are, in the opinion of the CAA, directly related to those already identified as being affected by the change.

(c) Notwithstanding paragraph (a) and (b) above, the CAA may at any time, after the application or notification of a change by the aerodrome operator, decide to notify the aerodrome operator of any certification specifications that it deems necessary for the proposed change.

AMC2 ADR.AR.C.040(a) Changes

CHANGES REQUIRING PRIOR APPROVAL

(a) Upon receiving an application for a proposed change that requires a prior approval, the CAA should, in due time:

(1) assess the proposed change in relation to the certification basis, and the applicable requirements of Part-ADR.OR, Part-ADR.OPS, as well as any other applicable requirements;

(2) assess if the aerodrome operator has identified all the applicable certification specifications, applicable requirements of Part-ADR.OR, Part-ADR.OPS, or other applicable requirements which are related to or affected by the change, as well as

any proposal of the applicant for the demonstration of an equivalent level of safety;

(3) assess the actions proposed by the aerodrome operator in order to show compliance with (1) and (2) above;

(4) review and assess the content of proposed changes to the aerodrome manual; and

(5) evaluate the safety assessment that has been submitted by the aerodrome operator, in accordance with GM3 ADR.AR.C.035(a) and verify its compliance with ADR.OR.B.040(f).

(b) The CAA should also determine, in due time:

(1) if the proposed change is directly related to any other certification specification which had been included in the certification basis. If the CAA finds such a relationship, it should include these related certification specifications amongst those to be notified to the applicant; and

(2) if the proposed change is such that a special condition, or an amendment to an existing special condition is required.

(c) The CAA should document and notify, in writing, the aerodrome operator, in due time, of:

(1) the certification specifications that it has identified to be applicable in accordance with the previous paragraphs (a) and (b);

(2) any provisions for which the CAA has accepted the applicant to demonstrate an equivalent level of safety; and

(3) any special conditions, or amendments to special conditions it finds necessary.

(d) Any subsequent changes to the items mentioned in paragraph (c), should be documented and notified to the aerodrome operator, in writing, in due time.

(e) The CAA should, in due time, verify the compliance of the aerodrome operator and, depending on the change, examine the need for prescribing any condition for the operation of the aerodrome during the change.

(f) When notifying the aerodrome operator in accordance with paragraph (c) or (d), the CAA should also inform him/her of the right of appeal, as exists under the applicable national legislation.

AMC1 ADR.AR.C.040(a);(f) Changes

GENERAL

(a) Changes in nominated persons: The CAA should be informed of any changes to nominated persons (see ADR.OR.D.015) that may affect the certificate or the terms of approval attached to it. When an aerodrome/airport operator submits the name of a nominee for the nominated persons, the CAA should accept him/her and assess his/her qualifications, and may interview the nominee, or call for additional evidence of his/her suitability. (see GM1 ADR.AR.C.035(a)).

(b) The CAA should receive from the aerodrome/airport operator each management system documentation amendment, including amendments that do not require prior approval by the CAA. A documented systematic approach should be used for maintaining the information on when an amendment was received by the CAA and when it was approved.

(c) Where the amendment requires the CAA approval, the CAA, when satisfied, should indicate its approval in writing. Where the amendment does not require prior approval, the CAA should acknowledge receipt in writing within the time limits existing under the relevant national legislation.

(d) For changes requiring prior approval, in order to verify the aerodrome/airport operator's compliance with the applicable requirements, the CAA should consider the need to conduct an audit of the operator, limited to the extent of the changes. If required for verification, the audit should include additional interviews and inspections carried out at the aerodrome/airport operator's facilities.

GM1 ADR.AR.C.040(c) Changes

AMENDMENTS TO THE TERMS OF THE CERTIFICATE
The CAA should amend the terms of the certificate when the terms have changed, irrespective of the magnitude of the change.

GM1 ADR.AR.C.040(d) Changes

CONDITIONS UNDER WHICH TO OPERATE DURING A CHANGE
The conditions or limitations under which an aerodrome/airport operator can operate during a change should be approved by the CAA but should usually be elaborated between the operator and the CAA upon suggestion of the aerodrome/airport operator.

GM1 ADR.AR.C.050 Declarations of providers of apron management services

VERIFICATION OF COMPLIANCE — DECLARATIONS
The verification made by the CAA upon receipt of a declaration does not necessarily imply an inspection. The primary aim is to check whether what is declared complies with applicable requirements.

GM1 ADR.AR.C.055 Findings, observations, corrective actions, and enforcement measures

ENFORCEMENT MEASURES — FINANCIAL PENALTIES
The CAA may additionally, and depending on the nature and the repetitiveness of the findings, or the level of implementation of the corrective actions, impose financial penalties in accordance with the applicable national legislation, which are effective, proportionate, and dissuasive.

GM2 ADR.AR.C.055 Findings, observations, corrective actions, and enforcement measures

TRAINING
For a level 1 finding, it may be necessary for the CAA to ensure that further training by the aerodrome/airport operator, or the provider of the apron management services is carried out, and audited by the CAA before the activity is resumed, dependent upon the nature of the finding.

GM3 ADR.AR.C.055 Findings, observations, corrective actions, and enforcement measures

CATEGORIES OF FINDINGS — DOCUMENTARY EVIDENCE
Examples of documentary evidence include, but are not limited to:

(a) aerodrome or equipment manuals;
(b) contracts or other types of arrangements;
(c) training, qualification, or medical records;
(d) inspection records;
(e) test or exercise results;
(f) internal audit results;
(g) maintenance records; and
(h) other similar material required to be maintained by the aerodrome operator, or the provider of apron management services.

ANNEX II ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL TO ADR-OR - ORGANIZATION REQUIREMENTS – AERODROME/AIRPORT OPERATORS

SUBPART A — GENERAL REQUIREMENTS (ADR.OR.A)

AMC1 ADR.OR.A.015 Means of compliance

DEMONSTRATION OF COMPLIANCE

In order to demonstrate that the Implementing Rules are met, a safety (risk) assessment should be completed and documented. The result of this safety (risk) assessment should demonstrate that an equivalent level of safety to that established by the Acceptable Means of Compliance (AMC) adopted by the CAA is reached.

SUBPART B — CERTIFICATION (ADR.OR.B)

AMC1 ADR.OR.B.015(a) Application for a certificate

APPLICATION

The application should be made in writing, and be signed by the applicant, using a standardized form established by the CAA.

AMC1 ADR.OR.B.015(b)(1);(2);(3);(4) Application for a certificate

INFORMATION TO BE PROVIDED TO THE CAA

(a) The applicant should:

(1) provide its telephone, and fax number, and e-mail address for communication with the CAA;

(2) indicate the names of its employees whom the CAA would contact in order to address any issues that might arise during the evaluation of the application, and the certification process.

(b) The applicant should provide the CAA with the following:

(1) information about the location of the aerodrome: the exact location of the aerodrome should be depicted on a map on a scale not larger than A4 size;

(2) information about the type of operations at the aerodrome, including:

(i) operations during the day and/or night, and type of approaches;

(ii) landing, and/or take-off operations on each runway;

(iii) the aircraft types to be served at the aerodrome, and the aircraft type to be used for the design of the aerodrome; and

(iv) any limitations to the operation of the aerodrome.

(3) the drawing(s) showing the design of the aerodrome, which should:

(i) be in a on a scale not larger than A4 size;

(ii) be in an electronic and a paper format;

(iii) contain all the necessary information, including:

(A) runway(s) orientation;

(B) the dimensions of the aerodrome's physical characteristics;

(C) the visual and non-visual aids;

(D) the obstacle limitation surfaces, and any other surfaces applicable; and

(E) the aerodrome facilities, installations, and fixed equipment and their location.

(4) description, height, and location of obstacles, in accordance with the applicable aeronautical data requirements (see ADR.OPS.A.005 and AMC1 ADR.OPS.A.005).

(c) The applicant should identify the applicable certification specifications for the design and type of operations of the proposed aerodrome and provide the CAA with evidence that the proposed design and operation complies with them. If relevant, the applicant should also provide the CAA with:

(1) the certification specifications for which it proposes to show compliance in a different manner and demonstrate an equivalent level of safety. Such a proposal has to be acceptable to the CAA. In such cases, the applicant should also propose the method that will be used to demonstrate compliance and achieve an equivalent level of safety, and submit all necessary documentation to support the proposal;

(2) any other proposal for which the applicant assumes that the certification specifications issued by the CAA are inadequate or inappropriate.

(d) The applicant should provide the CAA documentation to demonstrate how it will comply with the applicable requirements of the Aviation Code, ADR.OR, and ADR.OPS, and any other applicable requirements that are matching the aerodrome design and its operation.

GM1 ADR.OR.B.015(b)(2)(3)(4) Application for a certificate

METEOROLOGICAL CONDITIONS

The applicant should provide the CAA with a meteorological study of the area of the aerodrome, including temperature, visibility, ceiling and wind conditions; moreover, the study should provide information on wind conditions occurring with poor visibility and/or low cloud base at the aerodrome, and their frequency, as well as the accompanying wind direction and speed.

AMC1 ADR.OR.B.015(b)(4) Application for a certificate

EVIDENCE OF ARRANGEMENTS WITH THIRD PARTIES

The applicant should provide all necessary evidence for arrangements with third parties that provide, or intend to provide services, or undertake activities at the aerodrome, whose activities may have an impact on safety.

AMC1 ADR.OR.B.015(b)(5) Application for a certificate

ADEQUACY OF RESOURCES

(a) General

The applicant should provide all necessary information needed in order to demonstrate to the CAA that its proposed organization and management are suitable, and properly matched to the scale and scope of the operation.

The aerodrome/airport operator should have the ability to discharge its responsibilities with regard to safety. The accountable manager should have access, as well as the authorization, to the necessary resources to ensure that operations are carried out in accordance with the applicable requirements. The resources include, but are not limited to, personnel, tools and equipment, as well as financial resources.

(b) Arrangements with other parties

The applicant should indicate those services that are going to be provided directly by the applicant itself and those that will be provided by contracted third parties with regard to the adequacy of the resources.

The applicant should also provide evidence of arrangements if third parties are going to be involved in the provision of services. In addition, the applicant should provide any relevant information needed, or requested by the CAA, regarding such third parties.

GM1 ADR.OR.B.015(b)(5) Application for a certificate

ADEQUACY OF RESOURCES

(a) General

In demonstrating to the CAA the suitability of its organization and management, the applicant should, amongst others, take into account in its analysis the following:

(1) the size and complexity of the aerodrome;

(2) the type of traffic;

(3) the type of operations;

(4) the level and the density of the traffic;

(5) the operating hours of the aerodrome;

(6) the amount of full-time equivalents (FTEs) necessary for each activity;

(7) human factors principles;

(8) labour legislation; and

(9) the degree of subcontracting.

(b) Adequacy of financial resources

The financial resources required are linked to the overall objective for the safe operation and maintenance of the aerodrome, including the aerodrome/airport operator's capability to implement the corrective actions needed, in a timely manner. Information that may be provided to the CAA includes audited accounts of the previous financial year, business plans etc.

AMC1 ADR.OR.B.015(b)(6) Application for a certificate

RELATIONSHIP OF THE APPLICANT WITH THE AERODROME OWNER

The applicant should demonstrate to the CAA, in accordance with the applicable national legislation that he/she is duly authorized to undertake all activities necessary under the provisions of the Aviation Code, IR and any other applicable national rules.

The applicant should also provide the CAA with all information necessary, under the applicable national legislation, to demonstrate to the CAA its relationship with the aerodrome owner, and/or the owner of the land to be used for the aerodrome development.

Such documentation should include, but is not limited to, contracts, lease agreements, authorizations between the persons involved, etc.

AMC1 ADR.OR.B.015(b)(7) Application for a certificate

INFORMATION TO BE PROVIDED FOR MANAGEMENT PERSONNEL

The applicant should provide information regarding the qualifications, and experience of the accountable manager, and the other nominated persons required.

AMC1 ADR.OR.B.015(b)(9) Application for a certificate

AERODROME MANUAL

The aerodrome manual and its amendments may be additionally submitted to the CAA in electronic format. If the aerodrome manual is submitted in electronic format, the format should be such that allows the CAA to review, store, and reproduce it.

GM1 ADR.OR.B.015 Application for a certificate

INITIAL INTEREST

Prior to submitting an application for a certificate to the CAA, an applicant should arrange for a meeting with the CAA.

The applicant should also make arrangements for its key personnel to be present during this meeting.

During this meeting, the applicant should present to the authority its plans with regard to the aerodrome.

During the meeting, the applicant may be:

(a) provided by the CAA with general information about the applicable requirements for the aerodrome;

(b) provided with copies of the applicable requirements, and a description of the procedures that are followed during the certification process; and

(c) informed by the CAA about possible approvals, permits, or clearances that may be needed to be obtained from other competent authorities of the Republic of Moldova.

GM1 ADR.OR.B.015(b)(2) Application for a certificate

AERODROME BOUNDARIES

The map submitted with the application should indicate the boundary of the aerodrome area. It should include, at least, runways, taxiways, aprons, associated strips, runway end safety areas, stopways, clearways, aerodrome visual aids, fixed aerodrome equipment, other aerodrome operational areas, areas adjacent to the movement area, etc., while maintenance areas may be excluded if acceptable to the CAA.

The above aerodrome boundary should not be confused with the boundaries established for other purposes, such as fences, the land ownership boundaries used by local planning authorities, or those used to designate security restricted zones.

AMC1 ADR.OR.B.017(a) Application for a revalidation

APPLICATION

The application should be made in written, and signed by the applicant, using a standardized form established by the CAA.

AMC1 ADR.OR.B.017(b)(1) Application for a revalidation

INFORMATION TO BE PROVIDED TO THE CAA

The applicant should:

(1) provide its telephone, and fax number, and e-mail address for communication with the CAA;

(2) indicate the names of its employees whom the CAA would contact in order to address any issues that might arise during the evaluation of the application, and the certification process.

AMC1 ADR.OR.B.017(b)(2) Application for a revalidation

ADEQUACY OF RESOURCES

In conformity with AMC1 ADR.OR.B.015(b)(5)

GM1 ADR.OR.B.017(b)(2) Application for a revalidation

ADEQUACY OF RESOURCES

In conformity with GM1 ADR.OR.B.015(b)(2)

GM1 ADR.OR.B.017 (b)(3) Declaration - Demonstration of compliance

MODEL FORM OF DECLARATION ON OWN RESPONSIBILITY THAT NO CHANGES HAVE BEEN MADE TO THE DOCUMENTS

DECLARATION **on own responsibility that no changes have been made to the documents of the aerodrome/airport operator** In accordance with the Government decision no.653/2018 on approval of the Regulation regarding administrative procedures related to aerodromes
Aerodrome name — Location indicator:
Aerodrome/airport operator Name: _____ Place in which the operator is established or residing: _____ Name and contact details of the accountable manager: _____
Statement:
I HEREBY CONFIRM THAT THERE ARE NO CHANGES TO THE DOCUMENTS *(or parts of these documents - indicate, if available)* **STIPULATED UNDER ADR.OR.B.015 2), 3), 4), 6) AND 7), SUBMITTED TO THE CAA DURING THE INITIAL CERTIFICATION / LAST REVALIDATION** *(required - emphasize).*
Date, name and signature of the accountable manager

AMC1 ADR.OR.B.025(a)(1) Demonstration of compliance

USE OF THIRD PARTIES TO DEMONSTRATE COMPLIANCE

While performing the necessary actions, inspections, tests, safety assessments, or exercises necessary to demonstrate compliance, the aerodrome operator may also use contracted third parties.

In any case, the responsibility remains with the aerodrome/airport operator.

AMC2 ADR.OR.B.025(a)(1) Demonstration of compliance

FLIGHT PROCEDURES

Evidence that the flight procedures of the aerodrome have been approved, as required by the applicable requirements, is considered to be an Acceptable Means of Compliance.

GM1 ADR.OR.B.025 (a)(3) Demonstration of compliance

MODEL FORM OF DECLARATION OF COMPLIANCE — AERODROME/AIRPORT OPERATORS

Declaration of compliance of aerodrome/airport operator
In accordance with the Government decision no.653/2018 on approval of the Regulation regarding administrative procedures related to aerodromes
Aerodrome name — Location indicator:
Aerodrome/airport operator Name: Place in which the operator is established or residing: Name and contact details of the accountable manager:
Statements:
The certification basis is complied with, and the aerodrome, as well as its obstacle limitation and protection surfaces, and other areas associated with the aerodrome, have no features or characteristics making it unsafe for operation.
All personnel are qualified, competent, and trained in accordance with the applicable requirements.
The management system documentation, including the aerodrome manual, comply with the applicable requirements set out in ADR.OR and ADR.OPS.
The operation and maintenance of the aerodrome will be carried out in accordance with the requirements of the Aviation Code and the Implementing Rules, the terms of the certificate, and the procedures and instructions specified in the aerodrome manual.
The aerodrome/airport operator confirms that the information disclosed in this declaration is correct.
Date, name and signature of the accountable manager

AMC1 ADR.OR.B.040(a);(b) Changes

CHANGES REQUIRING PRIOR APPROVAL

The aerodrome/airport operator should ensure that prior to initiating any change to the aerodrome or its operation, which requires prior approval, an application is submitted to the CAA. The applicant should provide documentation containing a description of the proposed change, in which the following are identified:

(a) the terms of the certificate, and/or the elements of the certification basis, and/or the safety-critical aerodrome equipment and/or aerodrome/airport operator's management system (as required by ADR.OR.D.005 (b)), and the parts of aerodrome manual, which are affected by the change, including relevant appropriate detailed design drawings;

(b) the certification specifications with which the proposed change has been designed to comply with, including the certification specifications for which the applicant proposes to show compliance in a different manner in order to demonstrate an equivalent level of safety (for such cases see AMC1 ADR.OR.B.015(b)(1);(2);(3);(4), paragraph (c)(1));

(c) the requirements of ADR.OR and ADR.OPS, and any other applicable requirements that have to be complied with as a result of the proposed change, including the way in which compliance is intended to be demonstrated; and

(d) the safety assessment required under ADR.OR.B.040(f).

GM1 ADR.OR.B.040(a);(b) Changes

CHANGES REQUIRING PRIOR APPROVAL

The following is a list of items which should be granted prior approval by the CAA, as specified in the applicable Implementing Rules.

(a) Use of alternative means of compliance as required by ADR.OR.A.015 Means of Compliance.

(b) Changes to the management and notification procedure for changes not requiring a prior approval, as required by ADR.OR.B.015 (b)(4) Application for a certificate.

(c) Changes to the certification basis, or the terms of the certificate, as required by ADR.OR.B.040 (a)(1) Changes.

(d) Changes to safety-critical aerodrome equipment as required by ADR.OR.B.040 (a)(1) Changes.

(e) Changes significantly affecting elements of the aerodrome operator's management system as required by ADR.OR.B.040(a)(2) Changes.

(f) Changes to the level of protection of rescue and firefighting services as required by ADR.OPS.B.010 (a)(1)(2) Rescue and firefighting services.

(g) Changes to low visibility procedures as required by ADR.OPS.B.045 (b) Low Visibility Operations.

(h) Operation of aircraft with higher code letter as required by ADR.OPS.B.090(a) Use of the aerodrome by higher code letter aircraft.

Moreover the CAA may require prior approval for changes to any obstacles, developments and other activities within the areas monitored by the aerodrome/airport operator in accordance with ADR.OPS.B.075, which may endanger safety and adversely affect the operation of an aerodrome, as required by ADR.AR.C.005 (e).

GM1 ADR.OR.B.040(f) Changes

ASSESSMENT OF CHANGES

(a) Safety assessment for a change

A safety assessment for a change should include:

(1) identification of the scope of the change;

(2) identification of hazards;

(3) determination of the safety criteria applicable to the change;

(4) risk analysis in relation to the harmful effects or improvements in safety related to the change;

(5) risk evaluation and, if required, risk mitigation for the change to meet the applicable safety criteria;

(6) verification that the change conforms to the scope that was subject to safety assessment, and meets the safety criteria, before the change is put into operation; and

(7) the specification of the monitoring requirements necessary to ensure that the aerodrome and its operation will continue to meet the safety criteria after the change has taken place.

(b) Scope of the safety assessment

The scope of the safety assessment should include the following elements and their interaction:

(1) the aerodrome, its operation, management, and human elements being changed;

(2) interfaces and interactions between the elements being changed and the remainder of the system;

(3) interfaces and interactions between the elements being changed and the environment in which it is intended to operate; and

(4) the full lifecycle of the change from definition to operations.

(c) Safety criteria

The safety criteria used should be defined in accordance with the procedures for the management of change contained in the aerodrome manual.

The safety criteria used should, depending on the availability of data, be specified with reference to explicit quantitative acceptable safety risk levels, recognized standards, and/or codes of practice, the safety performance of the existing system, or a similar system.

GM2 ADR.OR.B.040(f) Changes

ASSESSMENT OF CHANGES - LOCAL RUNWAY SAFETY TEAM

For the role of the Local Runway Safety Team prior to implementing changes, see also GM2 ADR.OR.D.027.

GM3 ADR.OR.B.040(f) Changes

ASSESSMENT OF CHANGES – RUNWAY SAFETY

Particular attention should be given to changes which may have an effect on runway safety. This includes the introduction of, or changes to noise mitigation or noise abatement procedures.

GM1 ADR.OR.B.060 Declaration of providers of apron management services

MODEL FORM OF DECLARATION OF COMPLIANCE — PROVIDERS OF APRON MANAGEMENT SERVICES

Declaration of compliance of provider of Apron Management Services In accordance with the Government decision no.653/2018 on approval of the Regulation regarding administrative procedures related to aerodromes pursuant to the Aviation Code
Provider of apron management services Company name and address: Name and contact details of the accountable manager:
Starting date of operation:
Aerodrome(s) at which the apron management services are provided:
Applicable requirements set out in ADR.OPS on the provision of apron management services are documented and reflected in the aerodrome manual.
Attached to this declaration is a list of alternative means of compliance with references to the AMCs they replace, in accordance with ADR.OR.A.015(c).
The services are provided in accordance with the content of the relevant aerodrome manual.
Personnel of the apron management services provider have received the necessary initial training, and receive recurrent training to ensure continuing competence.
(If applicable) The operator has implemented and demonstrated conformance to an officially recognized industry standard. Reference of the standard: Certification body: Date of the last conformance audit:
Any change in the operation that affects the information disclosed in this declaration will be notified to the CAA.
I hereby confirm that the information disclosed in this declaration is correct.
Date and signature of the accountable manager

AMC1 ADR.OR.B.065 Termination of operation

TERMINATION OF OPERATION

In case of intended termination of the operation of the aerodrome, the aerodrome/airport operator should notify, in writing, the CAA and the Aeronautical Information Service provider. The notification should be done in such time in advance, so as to allow for the timely publication of the changes, and their notification by the Aeronautical Information Regulation And Control (AIRAC) system in accordance with the related timeframe.

Upon the termination of the operation, the aerodrome/airport operator should apply closed runway markings, as well as any other measure the CAA has found appropriate.

SUBPART C — ADDITIONAL RESPONSIBILITIES (ADR.OR.C)

AMC1 ADR.OR.C.005(c) Aerodrome/airport operator Responsibilities

PUBLICATION OF INFORMATION TO THE AERONAUTICAL INFORMATION PUBLICATION

A description of cases involving exemptions, derogations, cases of equivalent level of safety, special conditions, including limitations with regard to the use of the aerodrome, should be published in the Aeronautical Information Publication (AIP) Moldova.

AMC1 ADR.OR.C.020(b) Findings

GENERAL

The corrective action plan defined by the aerodrome/airport operator should address the effects of the non-compliance, as well as its root cause.

GM1 ADR.OR.C.020 Findings

GENERAL

(a) Preventive action is the action to eliminate the cause of a potential non-compliance or other undesirable potential situation.

(b) Corrective action is the action to eliminate or mitigate the root cause(s), and prevent recurrence of an existing detected non-compliance, or other undesirable condition or situation. Proper determination of the root cause is crucial for defining effective corrective actions to prevent recurrence.

(c) Correction is the action to eliminate a detected non-compliance.

AMC1 ADR.OR.C.030 Occurrence reporting

GENERAL

The aerodrome/airport operator and the provider of provider of apron management services should establish procedures to be used for reporting to the CAA and any other organization required which include:

(a) description of the applicable requirements for reporting;

(b) description of the reporting mechanism, including reporting forms, means, and deadlines;

(c) personnel responsible for reporting; and

(d) description of mechanism and personnel responsibilities for identifying root causes, and the actions that may be needed to be taken to prevent similar occurrences in the future, as appropriate.

AMC1 ADR.OR.C.040 Prevention of fire

The aerodrome/airport operator should develop procedures and assign responsibilities for the control of smoking or activities that involve the use of fire hazard, as appropriate.

In addition, these procedures should address the adoption and use of mitigating measures when necessary activities (e.g. maintenance, etc.) which might involve fire hazard need to be authorized.

Such authorized activities may not include smoking within the movement area, other operational areas of the aerodrome, or areas of the aerodrome where fuel or other flammable material are stored.

GM1 ADR.OR.C.045 Use of alcohol, psychoactive substances and medicines

(a) The procedures that the aerodrome/airport operator should establish with respect to the level of consumption of alcohol, psychoactive substances and medicines are applicable

to all persons referred to in paragraph (a) of ADR.OR.C.045. This includes the following:

(1) personnel involved in the operation, rescue and firefighting, and maintenance of the aerodrome, irrespectively of the relationship they have with the aerodrome/airport operator (e.g. directly employed by the aerodrome/airport operator or by organizations contracted by the aerodrome/airport operator);

(2) unescorted persons operating on the movement area or other operational areas of the aerodrome. This category of persons includes:

(i) persons employed directly by the aerodrome/airport operator, or by organizations contracted by the aerodrome/airport operator, which are not involved in the operation, rescue and firefighting, and maintenance of the aerodrome (e.g. aerodrome security personnel);

(ii) persons employed by other organizations (e.g. ground handling companies).

(b) Notwithstanding the responsibilities of the organizations referred to in paragraph (a)(2)(ii), the aerodrome/airport operator should ensure that these organizations establish appropriate procedures to comply with the provisions of ADR.OR.C.045 and the related requirements established by the aerodrome/airport operator.

Further guidance on this issue may be found in the ICAO Manual on Prevention of Problematic Use of Substances in the Aviation Workplace (Doc 9654).

SUBPART D — MANAGEMENT (ADR.OR.D)

AMC1 ADR.OR.D.005(b)(1) Management system

SAFETY MANAGEMENT SYSTEM

The safety management system of an aerodrome/airport operator should encompass safety by establishing an organizational structure for the management of safety proportionate and appropriate to the size of the aerodrome/airport operator, and the nature and type of operations. The organizational structure should include a Safety Review Board, and depending on its organizational complexity and structure, a Safety Services Office to assist the work of the safety manager, in accordance with paragraph (a) and (b) below:

(a) Safety Services Office

(1) The safety manager (see ADR.OR.D.015 and AMC1 ADR.OR.D.015(c)) should be responsible for the operation of the Safety Services Office which should be independent and neutral in terms of the processes and decisions made regarding the delivery of services by the line managers of operational units.

(2) The function of the Safety Services Office should be to:

(i) manage and oversee the hazard identification system;

(ii) monitor safety performance of operational units directly involved in aerodrome operations;

(iii) advise senior management on safety management matters; and

(iv) assist line managers with safety management matters.

(3) Operators of multiple aerodromes should either establish a central Safety Services Office and appropriate safety departments/functions at all aerodromes or separate Safety Services Office at each aerodrome. Arrangements should be made to ensure continuous flow of information and adequate coordination.

(b) Safety Review Board

(1) The Safety Review Board should be a high level committee that considers matters of strategic safety in support of the accountable manager’s safety accountability.

(2) The Safety Review Board should be chaired by the accountable manager, and be composed of heads of functional areas.

(3) The Safety Review Board should monitor:

(i) safety performance against the safety policy and objectives;

(ii) that any safety action is taken in a timely manner; and

(iii) the effectiveness of the organization’s safety management processes.

(4) The Safety Review Board should ensure that appropriate resources are allocated to achieve the established safety performance.

(5) The safety manager or any other relevant person may attend, as appropriate, Safety Review Board meetings. He/she may communicate to the accountable manager all information, as necessary, to allow decision making based on safety data.

(6) Operators of multiple aerodromes should either establish a central Safety Review Board, or separate Safety Review Boards for each aerodrome or group of aerodromes. In the case of central or group Safety Review Groups, they should ensure that all aerodromes are represented in the Safety Review Board, at the appropriate management level. Arrangements should be made to ensure continuous flow of information and adequate coordination.

In less complex aerodrome organizations/operations, the aerodrome/airport operator should nominate a person who fulfils the role of safety manager, and who is responsible for coordinating the safety management system (see ADR.OR.D.015 and AMC1 ADR.OR.D.015(c)).

GM1 ADR.OR.D.005(b)(1) Management system

SAFETY REVIEW BOARD — SAFETY ACTION GROUP

(a) Safety Review Board

Depending on the size of the organization, the type and complexity of operations, the responsibilities of the Safety Review Board may be included in other high level committees of the organization.

(b) Safety Action Group

(1) A Safety Action Group may be established as a standing group, or as an ad hoc group to assist or act on behalf of the Safety Review Board.

(2) More than one safety action group may be established depending on the scope of the task and specific expertise required.

(3) A Safety Action Group should report to, and take strategic direction from the Safety Review Board, and should be comprised of managers, supervisors, and personnel from operational areas.

(4) The Safety Action Group should:

(i) monitor operational safety;

(ii) resolve identified risks;

(iii) assess the impact on safety of operational services;

(iv) ensure that safety actions are implemented within agreed timescales.

(5) The Safety Action Group should review the effectiveness of previous safety recommendations and safety promotion.

GM2 ADR.OR.D.005(b)(1) Management system

SAFETY SERVICES OFFICE — SAFETY REVIEW BOARD — SAFETY ACTION GROUP

Different titles may also be used for the Safety Services Office, the Safety Review Board, and the Safety Actions Group.

AMC1 ADR.OR.D.005(b)(2) Management system

SAFETY POLICY

(a) The safety policy should:

(1) be endorsed by the accountable manager;

(2) clearly identify safety as the highest organizational priority over commercial, operational, environmental, or social pressures;

(3) reflect organizational commitments regarding safety and its proactive and systematic management;

(4) be communicated, with visible endorsement, throughout the organization;

(5) include safety reporting principles; and

(6) be periodically reviewed to ensure it remains relevant and appropriate to the organization.

(b) The safety policy should:

(1) include a commitment:

(i) to improve towards the highest safety standards;

(ii) to comply with all applicable legal requirements, meet all applicable standards, and consider best practices;

(iii) to provide appropriate resources;

(iv) to enforce safety as one primary responsibility of all managers and staff;

(2) include the safety reporting procedures;

(3) with reference to a just culture, clearly indicate which types of operational behaviours are unacceptable, and include the conditions under which disciplinary action would not apply; and

(4) be periodically reviewed to ensure it remains relevant and appropriate.

(c) Senior management should:

(1) continually promote the safety policy to all personnel, and demonstrate their commitment to it;

(2) provide necessary human and financial resources for its implementation; and

(3) establish safety objectives and performance standards.

GM1 ADR.OR.D.005(b)(2) Management system

SAFETY POLICY

(a) Safety policy — General

The safety policy is the means whereby the aerodrome/airport operator states its intention to maintain and, where practicable, improve safety levels in all its activities, and to minimize its contribution to the risk of an aircraft accident as far as reasonably practicable.

The safety policy should state that the purpose of safety reporting, and internal investigations is to improve safety, not to apportion blame to individuals.

(b) Safety policy — Just culture

The safety policy should actively encourage effective safety reporting and, by defining the line between acceptable performance (often unintended errors) and unacceptable performance (such as negligence, recklessness, violations, or sabotage), provide fair protection to reporters. A safety or just culture may not, however, preclude the 'criminalization of error', which is legally, ethically, and morally within the sovereign rights of the Republic of Moldova and established international agreements are observed. A judicial investigation, and consequences of some form, may be expected following an accident or serious incident especially if a failure resulted in lives lost or property damaged, even if no negligence or ill intent existed. A potential issue could, therefore, exist if voluntary hazard reports, which relate to latent deficiencies of a system or its performance, are treated in the same way as those concerning accident, and serious incident investigations. The intent of protecting hazard reports should not challenge the legitimacy of a judicial investigation, or demand undue immunity. However, legal argument does usually take precedence over any technical or safety-related argument.

AMC1 ADR.OR.D.005(b)(3) Management system

HAZARD IDENTIFICATION PROCESS

(a) Hazard identification should be based on a combination of reactive, proactive, and predictive methods of safety data collection. Reactive, proactive, and predictive schemes for hazard identification should be the formal means of collecting, recording, analyzing, acting on, and generating feedback about hazards and the associated risks that affect safety.

(b) All reporting systems, including confidential reporting schemes, should include an effective feedback process.

GM1 ADR.OR.D.005(b)(3) Management system

HAZARD IDENTIFICATION

(a) Hazard identification — General

(1) Hazard identification may include the following factors and processes:

(i) design factors, including equipment and task design;

(ii) procedures and operating practices, including their documentation and checklists, and their validation under actual operating conditions;

(iii) communications, including means, terminology, and language;

(iv) personnel factors, such as company policies for recruitment, training, remuneration, and allocation of resources;

(v) organizational factors, such as the compatibility of production and safety goals, the allocation of resources, operating pressures, and the corporate safety culture;

(vi) work environment factors, such as ambient noise and vibration, temperature, lighting, and the availability of protective equipment and clothing;

(vii) regulatory oversight factors, including the applicability and enforceability of regulations, the certification of equipment, personnel, and procedures, and the adequacy of oversight;

(viii) defenses, including such factors as the provision of adequate detection and warning systems, the error tolerance of equipment, and the resilience of equipment to errors and failures; and

(ix) human performance, restricted to medical conditions and physical limitations.

(2) Hazard identification may use internal and external sources.

(i) Internal sources:

(A) voluntary occurrence reporting schemes;

(B) safety surveys;

(C) safety audits;

(D) normal operations monitoring schemes;

(E) trend analysis;

(F) feedback from training; and

(G) investigation and follow-up of incidents

(ii) External sources:

(A) accident reports;

(B) state mandatory occurrence reporting system; and

(C) state voluntary reporting system.

(3) The methods used for hazard identification depends on the resources and constraints of each particular aerodrome/airport operator, and on the size and the complexity of the operations. Nevertheless, hazard identification, regardless of implementation, complexity and size, is part of the aerodrome/airport operator's safety documentation. Under mature safety management practices, hazard identification is a continuous, on-going daily activity. It is an integral part of the aerodrome/airport operator's processes. There are three specific conditions under which special attention to hazard identification should be paid. These three

conditions should trigger more in depth and far reaching hazard identification activities and include:

(i) any time that the aerodrome/airport operator experiences an unexplained increase in safety related events or regulatory infractions;

(ii) any time major operational changes are foreseen, including changes to key personnel or other major equipment or systems; and

(iii) before and during periods of significant organizational change, including rapid growth or contraction, corporate mergers, acquisitions, or downsizing.

(4) Hazard identification may use the following tools and techniques:

(i) brainstorming which is an unbounded but facilitated discussion with a group of experts;

(ii) Hazard and Operability (HAZOP) Study which is a systematic and structured approach using parameter and deviation guidewords. This technique relies on a very detailed system description being available for study, and usually involves breaking down the system into well-defined subsystems and functional or process flows between subsystems. Each element of the system is then subject to discussion within a multidisciplinary group of experts, against the various combinations of the guidewords and deviations;

(iii) checklists, which are lists of known hazards or hazard causes that have been derived from past experience. The past experience could be previous risk assessments, or similar systems, or operations, or from actual incidents that have occurred in the past. The technique involves the systematic use of an appropriate checklist, and the consideration of each item on the checklist for possible applicability to a particular system. Checklists should always be validated for applicability prior to use;

(iv) Failure Modes and Effects Analysis (FMEA), which is a 'bottom up' technique, used to consider ways in which the basic components of a system can fail to perform their design intent. The technique relies on a detailed system description, and considers the ways in which each sub-component of the system could fail to meet its design intent, and what the consequences could be for the overall system. For each sub-component of a system the FMEA should consider:

(A) all the potential ways that the component could fail;

(B) the effects that each of these failures would have on the system behaviour;

(C) the possible causes of the various failure modes; and

(D) how the failures might be mitigated within the system or its environment.

The system level at which the analysis is applied can vary, and is determined by the level of detail of the system description used to support the analysis. Depending on the nature and complexity of the system, the analysis could be undertaken by an individual system expert, or by a team of system experts acting in group sessions.

(v) the Structured What-If Technique (SWIFT) is a simple and effective alternative technique to HAZOP and involves a multidisciplinary team of experts. It is a facilitated brainstorming group activity, but is

typically carried out on a higher level system description, having fewer sub-elements, than for HAZOP and with a reduced set of prompts.

(5) Identified hazards should be registered in a hazard log (hazard register). The nature and format of such a hazard log may vary from a simple list of hazards to a more sophisticated relational database linking hazards to mitigations, responsibilities, and actions. The following information should be included in the hazard log:

(i) unique hazard reference number against each hazard;

(ii) hazard description;

(iii) indication of the potential causes of the hazard;

(iv) qualitative assessment of the possible outcomes and severities of consequences arising from the hazard;

(v) qualitative assessment of the risk associated with the possible consequences of the hazard;

(vi) description of the existing risk controls for the hazard; description of additional actions that are required to reduce safety risks, as well as target date of completion; and

(vii) indication of responsibilities in relation to the management of risk controls.

(6) Additionally, the following information may also be included in the hazard log:

(i) a quantitative assessment of the risk associated with the possible consequences of the hazard;

(ii) record of actual incidents or events related to the hazard, or its causes;

(iii) risks tolerability statement;

(iv) statement of formal system monitoring requirements;

(v) indication of how the hazard was identified;

(vi) hazard owner;

(vii) assumptions; and

(viii) third party stakeholders.

(b) Hazard identification — Indicators

(1) Reactive (lagging) indicators:

Metrics that measure events that have already occurred and that impact on safety performance.

As reactive indicators only reflect system failures, their use can only result in determining a reactive response. Although they do measure failure to control hazards, they do not normally reveal why the system failed, or if there are any latent hazards.

(2) Proactive (leading) indicators:

Metrics that measure inputs to the safety system (either within an organization, a sector, or across the total aviation system) to manage and improve safety performance.

Proactive indicators indicate good safety practices being introduced, developed, and adapted which by their inclusion seek to establish a proactive safety environment that engenders continuous improvement. They provide useful information when accident and incident rates are low to identify latent hazards and potential threats, and consequent opportunities for improvement.

There should always be a connection between a proactive indicator and the unwanted outcomes (or reactive indicators) that their monitoring is intended to warn against.

(3) Predictive indicators (precursor events):

These metrics can be considered as indicators that do not manifest themselves in accidents or serious incidents. They indicate less severe system failures or 'near misses' which when combined with other events may lead to an accident or serious incident.

In a large organization, a mature safety management system should include all of these measures. Risk management effort, however, should be targeted at leading indicators and precursor events.

AMC1 ADR.OR.D.005(b)(4) Management system

SAFETY RISK ASSESSMENT AND MITIGATION

(a) A formal safety (risk) assessment and mitigation process should be developed and maintained that ensures analysis (in terms of probability and severity of occurrence), assessment (in terms of tolerability), and control (in terms of mitigation) of risks.

(b) The levels of management who have the authority to make decisions regarding the tolerability of safety risks, in accordance with (a) above, should be specified in the aerodrome manual.

GM1 ADR.OR.D.005(b)(4) Management system

SAFETY RISK ASSESSMENT AND MITIGATION

Safety (risk) assessment is the analysis of the safety risks of the consequences of the hazards that have been determined. Safety risk analysis breaks down the risks into two components — the probability of occurrence of a damaging event or condition, and the severity of the event or condition, should it occur. Safety risk decision making and acceptance should be specified through a risk tolerability matrix. The definition and final construction of the matrix should be left to the operator to design, be documented in the aerodrome manual, and be subject to an approval by the CAA.

AMC1 ADR.OR.D.005(b)(5) Management system

SAFETY PERFORMANCE MONITORING AND MEASUREMENT

(a) Safety performance monitoring and measurement should be the process by which the safety performance of the aerodrome/airport operator is verified in comparison to the safety policy and objectives, identified safety risks and the mitigation measures.

(b) This process should include the setting of safety performance indicators and safety performance targets, and measuring the aerodrome/airport operator's safety performance against them.

GM1 ADR.OR.D.005(b)(5) Management system

SAFETY PERFORMANCE MONITORING AND MEASUREMENT

(a) The performance monitoring and measurement process should include:

(1) safety reporting, addressing also the status of compliance with the applicable requirements;

(2) safety studies which are rather large analyses encompassing broad safety concerns;

(3) safety reviews including trends reviews which are conducted during introduction and deployment of new technologies, change or implementation of procedures, or in situations of structural change in operations, or to explore increase in incidents or safety reports;

(4) safety audits which focus in the integrity of the aerodrome/airport operator's management system, and periodically assess the status of safety risk controls;

(5) safety surveys, which examine particular elements or procedures of a specific operation, such as problem areas or bottlenecks in daily operations, perceptions and opinions of operational personnel, and areas of dissent or confusion; and

(6) internal safety investigations whose scope should extend the scope of occurrences required to be reported to the CAA;

(b) The following generic aspects/areas could be considered:

(1) accountability for management of the operational activities and its ultimate accomplishment;

(2) authority to direct, control, or change the procedures, as well as to make key decisions such as safety risk acceptance decisions;

(3) procedures for operational activities;

(4) controls, including hardware, software, special procedures or procedural steps, and supervisory practices designed to keep operational activities on track;

(5) interfaces, including lines of authority between departments, lines of communication between employees, consistency of procedures, and clear delineation of responsibility between organizations, work units, and employees; and

(6) process measures to provide feedback to responsible parties that required actions are taking place, required outputs are being produced, and expected outcomes are being achieved.

AMC1 ADR.OR.D.005(b)(6) Management system

THE MANAGEMENT OF CHANGE

The aerodrome/airport operator should manage safety risks related to a change. The management of change should be a documented process to identify external and internal change that may have an adverse effect on safety.

It should make use of the aerodrome/airport operator's existing hazard identification, safety (risk) assessment, and mitigation processes.

GM1 ADR.OR.D.005(b)(6) Management system

THE MANAGEMENT OF CHANGE

(a) Change can introduce new hazards, impact the appropriateness and/or effectiveness of existing safety risk mitigation strategies. Changes may be external to the organization, or internal.

(b) A formal process for the management of change should take into account the following considerations:

(1) criticality of systems and activities;

(2) stability of systems and operational environments; and

(3) past performance.

(c) System description is one of the fundamental preliminary activities in the planning of the safety management system, to determine a baseline hazard analysis for the baseline system.

As part of the formal process of the management of change, the system description and the baseline hazard analysis should be reviewed periodically, even if circumstances of change are not present, to determine their continued validity.

When changes to the system are made, and periodically thereafter, the aerodrome/airport operator should go over its system and its actual operational environment, in order to

make sure it continues to be fully aware of the circumstances under which the provision of services takes place.

With regard to the management of change and safety (risk) assessments related to changes, see also ADR.OR.B.040 and GM1 ADR.OR.B.040(f).

AMC1 ADR.OR.D.005(b)(7) Management system

CONTINUOUS IMPROVEMENT OF THE SAFETY MANAGEMENT SYSTEM

The aerodrome/airport operator should continuously seek to improve its safety performance. The aerodrome/airport operator should develop and maintain a relevant formal process. Continuous improvement should be achieved through:

(a) proactive and reactive evaluation of facilities, equipment, documentation, and procedures;

(b) proactive evaluation of an individual's performance, to verify the fulfilment of that individual's safety responsibilities; and

(c) reactive evaluations in order to verify the effectiveness of the system for control and mitigation of safety risks.

GM1 ADR.OR.D.005(b)(7) Management system

CONTINUOUS IMPROVEMENT OF THE SAFETY MANAGEMENT SYSTEM

Continuous improvement of the safety management system, as part of the safety assurance, is achieved through the application of:

(a) internal evaluations;

(b) independent audits (both internal and external);

(c) strict document controls; and

(d) continuous monitoring of safety controls and mitigation actions.

AMC1 ADR.OR.D.005(b)(8) Management system

SAFETY MANAGEMENT SYSTEM TRAINING

(a) The aerodrome/airport operator should establish a safety management system training programme for all aerodrome operations, rescue and firefighting, and maintenance personnel, including all management personnel of the aerodrome (e.g. supervisors, managers, senior managers, and the accountable manager), regardless of their level in the aerodrome/airport operator's organization.

(b) The amount and level of detail of safety training should be proportionate and appropriate to the individual's responsibility and involvement in the safety management system.

(c) The safety management system training programme should be developed in accordance with AMC1 ADR.OR.D.017(a);(b), and AMC1 ADR.OPS.B.010 (b);(c) and be incorporated in the training programme foreseen therein.

GM1 ADR.OR.D.005(b)(8) Management system

STAFF SAFETY MANAGEMENT SYSTEM TRAINING REQUIREMENTS

(a) Operations, rescue and firefighting, and maintenance personnel

(1) Safety training should address safety responsibilities, including adherence to all operating and safety procedures, and recognizing and reporting hazards;

(2) The training objectives should include the organization's safety policy and safety management system fundamentals, and overview;

(3) The contents should include:

(i) definition of hazards;

(ii) consequences and risks;

(iii) the safety risk management process, including roles and responsibilities; and

(iv) safety reporting and the organization's safety reporting system(s).

(b) Managers and supervisors

(1) Safety training should address safety responsibilities, including promoting the SMS and engaging operational personnel in hazard reporting;

(2) In addition to the training objectives established for operational personnel, training objectives for managers and supervisors should include a detailed knowledge of the safety process, hazard identification and safety risk management and mitigation, and change management;

(3) In addition to the contents specified for operational personnel, the training contents for supervisors and managers should include safety data analysis.

(c) Senior managers

(1) Safety training should include safety responsibilities, including compliance with ICAO, EASA, national and the organization's own safety requirements, allocation of resources, ensuring effective inter-departmental safety communication, and active promotion of the safety management system;

(2) In addition to the objectives of the two previous employee groups, safety training should include safety assurance and safety promotion, safety roles and responsibilities, and establishing acceptable levels of safety.

(d) Accountable manager

The training should provide the accountable manager with a general awareness of the organization's safety management system, including safety management system roles and responsibilities, safety policy and objectives, safety risk management, and safety assurance.

AMC1 ADR.OR.D.005(b)(9) Management system

SAFETY COMMUNICATION

(a) The aerodrome/airport operator should communicate safety management system objectives and procedures to all operational personnel, and the safety management system and its application should be evident in all aspects of operations.

(b) Communication should flow between the safety manager and operational personnel throughout the organization. The safety manager should communicate the performance of the organization's safety management system through suitable means. The safety manager should, also, ensure that lessons learned from investigations, safety related events, or other safety related experiences, both internally and from other organizations, are distributed widely.

(c) Safety communication should aim to:

(1) ensure that all staff are fully aware of the safety management system;

(2) convey safety-critical information;

(3) explain why particular actions are taken; and

(4) explain why safety procedures are introduced or changed.

GM1 ADR.OR.D.005(b)(9) Management system

SAFETY COMMUNICATION

(a) An aerodrome/airport operator, may use the following tools to communicate safety information:

(1) Safety Management System Manual;

(2) safety processes and procedures;

(3) safety newsletters, notices, and bulletins; and

(4) websites or emails;

(b) Regular meetings with personnel where information, actions, and procedures are discussed may be used to communicate safety matters.

AMC1 ADR.OR.D.005(b)(10) Management system

COORDINATION OF THE AERODROME EMERGENCY RESPONSE PLAN

The coordination of the aerodrome emergency response plan, established in accordance with the requirements contained in ADR.OPS, with the safety management system should ensure continuous improvement of the systems and procedures contained within the plan.

GM1 ADR.OR.D.005(b)(10) Management system

COORDINATION OF THE AERODROME EMERGENCY RESPONSE PLAN

Continuous improvement of the systems and procedures contained within the aerodrome emergency response plan may, amongst others, be obtained by:

(a) conducting a review of the relevant parts of the emergency response plan after a full or partial exercise;

(b) debriefing and analyzing the emergency response operations after an emergency situation; and

(c) developing new emergency procedures or systems as part of the emergency response plan when new hazards are identified by the safety management system, to ensure, amongst others, the coordination with the emergency response plans of other interfacing organizations.

AMC1 ADR.OR.D.005(b)(11) Management system

COMPLIANCE MONITORING

(a) Compliance monitoring

(1) The implementation and use of a compliance monitoring process should enable the aerodrome/airport operator to monitor compliance with the relevant requirements of ADR.OPS, as well as any other applicable regulatory requirements, or requirements established by the aerodrome/airport operator.

The aerodrome/airport operator should specify the basic structure of the compliance monitoring applicable to the activities conducted.

The compliance monitoring should be properly implemented, maintained and continually reviewed and improved as necessary.

Compliance monitoring should be structured according to the size of organization and the complexity of the activities to be monitored, including those which have been subcontracted.

Compliance monitoring should include a feedback system of findings to the accountable manager to ensure effective implementation of corrective actions as necessary.

(2) An aerodrome/airport operator should monitor compliance with the procedures it has designed, to ensure safe activities. In doing so, an aerodrome/airport operator should as a minimum, and where appropriate, monitor compliance with:

(i) privileges of the aerodrome operator;

(ii) manuals, logs, and records;

(iii) training standards;

(iv) required resources; and

(v) management system procedures and manuals.

(b) Organizational set-up

(1) A person should be responsible for compliance monitoring.

The accountable manager, with regards to his/her direct accountability for safety, should ensure, in accordance with ADR.OR.D.015 (a), that sufficient resources are allocated for compliance monitoring. In the case the person responsible for the compliance monitoring acts also as safety manager, the accountable manager should ensure that sufficient resources are allocated to both functions, taking into account the size of the aerodrome/airport operator, and the nature and complexity of its activities.

(2) The independence of the compliance monitoring should be established by ensuring that audits and inspections are carried out by personnel not responsible for the function, procedure, etc. being audited.

(3) Personnel involved in compliance monitoring should have access to any part of the aerodrome organization, and any contracted organization as required.

(c) Compliance monitoring documentation

(1) Relevant documentation should include the relevant part(s) of the aerodrome operator's management system documentation.

(2) In addition, relevant documentation should also include the following:

(i) terminology;

(ii) specified activity standards;

(iii) a description of the organization of the aerodrome operator;

(iv) the allocation of duties and responsibilities;

(v) procedures to ensure regulatory compliance;

(vi) the compliance monitoring programme, reflecting:

(A) schedule of the monitoring programme;

(B) audit procedures;

(C) reporting procedures;

(D) follow-up and corrective action procedures; and

(E) recording system;

(vii) the training syllabus referred to in (d)(2); and

(viii) document control.

(d) Training

(1) Correct and thorough training is essential to optimize compliance in every aerodrome/airport operator. In order to achieve significant outcomes of such training, the operator should ensure that all personnel understand the objectives as laid down in the operator's management system documentation.

(2) Those responsible for managing the compliance monitoring should receive training on this task. Such training should cover the requirements of compliance monitoring, manuals and procedures related to the task, audit techniques, reporting, and recording.

(3) Time should be provided to train the personnel involved in compliance management, and for briefing the remaining of the personnel.

(4) The allocation of time and resources should be based on the volume and complexity of the activities concerned.

(e) Compliance monitoring — audit scheduling

(1) A defined audit schedule to be completed during a specified calendar period and a periodic review cycle for each area should be established. The compliance monitoring itself should also be audited according to a defined audit schedule. The schedule should allow for unscheduled audits when trends are identified. Follow-up audits should be scheduled to verify that corrective action was carried out, and that it was effective and completed, in accordance with the policies and procedures specified in the aerodrome manual.

(2) The aerodrome, its management system key processes, procedures and its operation should be audited within the first 12 months since the date of the issuance of the certificate.

(3) After that, the aerodrome/airport operator should consider the results of its safety (risk) assessments and of its past compliance monitoring activities, in order to adapt the calendar period within which an audit or a series of audits should be conducted, to cover the whole aerodrome, its management system key processes, procedures and its operation in a manner, and at intervals set out in the aerodrome manual. This calendar period, should be consistent with the relevant CAA oversight planning cycle.

AMC2 ADR.OR.D.005(b)(11) Management system

RESPONSIBILITY FOR COMPLIANCE MONITORING

(a) The responsibility for the compliance monitoring should:

(1) be with a person who has direct access to, and is responsible to the accountable manager;

(2) not be with one of the persons referred to in ADR.OR.D.015(b) or ADR.OR.D.015(c), except that in less complex aerodrome organizations/operations, it may also be with the accountable manager or the person referred to in ADR.OR.D.015(c).

(b) Persons allocated the responsibility for the compliance monitoring should have:

(1) adequate experience and expertise in aerodrome operations, or aerodrome maintenance, or similar area;

(2) adequate knowledge of, and experience in safety management and quality assurance;

(3) knowledge of the aerodrome manual; and

(4) comprehensive knowledge of the applicable requirements in the area of aerodromes.

GM1 ADR.OR.D.005(b)(11) Management system

COMPLIANCE MONITORING — GENERAL

(a) The organizational set-up of the compliance monitoring should reflect the size of the aerodrome/airport operator, and the nature and complexity of its activities. The person responsible for the compliance monitoring may perform all audits and inspections himself/herself, or appoint one or more auditors by choosing personnel having the related competence as defined in paragraph (b) of AMC2 ADR.OR.D.005(b)(11) either from within, or outside the aerodrome/airport operator.

(b) Regardless of the option chosen, it must be ensured that the independence of the audit function is not affected, in particular, in cases where those performing the audit or inspection are also responsible for other functions for the aerodrome/airport operator.

(c) In case external personnel are used to perform compliance audits or inspections:

(1) any such audits or inspections are performed under the responsibility of the person responsible for the compliance monitoring; and

(2) the aerodrome/airport operator remains responsible to ensure that the external personnel has relevant knowledge, background, and experience as appropriate to the activities being audited or inspected, including knowledge and experience in compliance monitoring.

(d) The aerodrome/airport operator retains the ultimate responsibility for the effectiveness of the compliance monitoring, in particular for the effective implementation and follow-up of all corrective actions.

AMC1 ADR.OR.D.005(c) Management system

AERODROME/AIRPORT OPERATOR MANAGEMENT SYSTEM DOCUMENTATION

The aerodrome/airport operator should ensure that the documented management system key processes include a process for making personnel aware of their responsibilities, as well as its amendment procedure.

The aerodrome/airport operator's management system documentation should, at least, include the following information:

(a) a statement signed by the accountable manager to confirm that the aerodrome/airport operator will continuously work in accordance with the applicable requirements and the operator's documentation;

(b) the aerodrome/airport operator's scope of activities;

(c) the titles and names of persons referred to in ADR.OR.D.015 and AMC2 ADR.OR.D.005(b)(11);

(d) an organization chart showing the lines of responsibility between the nominated persons;

(e) a general description and location of the facilities;

(f) procedures specifying how the aerodrome/airport operator ensures compliance with the applicable requirements;

(g) the amendment procedure for the operator's management system documentation; and

(h) safety management system outputs.

AMC2 ADR.OR.D.005(c) Management system

AERODROME/AIRPORT OPERATOR SAFETY MANAGEMENT MANUAL

(a) In cases where safety management is set out in a Safety Management Manual, it should be the key instrument for communicating the approach to safety for the aerodrome/airport operator. The Safety Management Manual should document all aspects of safety management, including the safety policy, objectives, procedures, and individual safety responsibilities.

(b) The contents of the Safety Management Manual should include:

(1) scope of the safety management system;

(2) safety policy and objectives;

(3) safety responsibilities of key safety personnel;

(4) documentation control procedures;

(5) safety assessment process, including hazard identification and risk management schemes;

(6) monitoring of implementation and effectiveness of safety actions, and risk mitigation measures;

(7) safety performance monitoring;

(8) safety reporting (including hazard reporting) and investigation;

(9) coordination of emergency response planning;

(10) management of change (including organizational changes with regard to safety responsibilities);

(11) safety promotion; and

(12) safety management system outputs.

GM1 ADR.OR.D.005(c) Management system

AERODROME/AIRPORT OPERATOR MANAGEMENT SYSTEM DOCUMENTATION

It is not required to duplicate information in several manuals. The Safety Management Manual is considered to be a part of the aerodrome manual.

AMC1 ADR.OR.D.007(a) Management of aeronautical data and aeronautical information

QUALITY MANAGEMENT SYSTEM FOR AERONAUTICAL DATA AND AERONAUTICAL INFORMATION PROVISION ACTIVITIES

(a) A quality management system supporting the origination, production, storage, handling, processing, transfer, and distribution of aeronautical data and aeronautical information should:

(1) define the quality policy in such a way as to meet the needs of different users as closely as possible;

(2) set up a quality assurance programme that contains procedures designed to verify that all operations are being conducted in accordance with the applicable requirements, standards and procedures, including the relevant requirements of ADR.OPS;

(3) provide evidence of the functioning of the quality system by means of manuals and monitoring documents;

(4) appoint management representatives to monitor compliance with, and adequacy of, procedures to ensure safe and efficient operational practices; and

(5) perform reviews of the quality system in place, and take remedial actions, as appropriate.

(b) An ISO 9001 certificate, issued by an appropriately accredited organization, is considered as an Acceptable Means of Compliance.

GM1 ADR.OR.D.007(a) Management of aeronautical data and aeronautical information

QUALITY MANAGEMENT SYSTEM FOR AERONAUTICAL DATA AND AERONAUTICAL INFORMATION PROVISION ACTIVITIES

An aerodrome/airport operator does not need to duplicate functions and activities in order to discharge the responsibilities related to the management of aeronautical data and aeronautical information provision activities.

In this respect, the compliance monitoring may be used for the purposes of ensuring compliance with the relevant requirements for management of aeronautical data and aeronautical information provision activities.

AMC1 ADR.OR.D.007(b) Management of aeronautical data and aeronautical information

SECURITY MANAGEMENT FOR AERONAUTICAL DATA AND AERONAUTICAL INFORMATION

(a) The security management objectives should be:

(1) to ensure the security of aeronautical data and aeronautical information received, produced, or otherwise employed so that it is protected from interference, and access to it is restricted only to those authorized; and

(2) to ensure that the security management measures meet appropriate national, EU, or international requirements for critical infrastructure and business continuity, and international standards for security management.

(b) Regarding the ISO standards, the relevant certificates issued by an appropriately accredited organisation, are considered as an Acceptable Means of Compliance.

AMC1 ADR.OR.D.010 Contracted activities

RESPONSIBILITY WHEN CONTRACTING ACTIVITIES

(a) An aerodrome/airport operator may contract certain activities to external organizations.

(b) A written agreement should exist between the aerodrome/airport operator and the contracted organization, clearly defining the contracted activities and the applicable requirements.

(c) The contracted safety related activities relevant to the agreement should be included in the aerodrome/airport operator's safety management and compliance monitoring programmes.

(d) The aerodrome/airport operator should ensure that the contracted organization has the necessary authorization, declaration, or approval when required, and commands the resources and competence to undertake the task; to this end, a prior audit of the contracted party should be conducted to ensure that the contracted organization meets the applicable requirements, and the requirements specified by the aerodrome/airport operator itself.

GM1 ADR.OR.D.010 Contracted activities

CONTRACTING — GENERAL

(a) Contracted activities to external organizations for the provision of services may include areas such as:

(1) maintenance of the aerodrome and equipment;

(2) surveying for aeronautical data;

(3) apron management services;

(4) training;

(5) rescue and firefighting services;

(6) aerodrome design, etc.

(b) In case of contracted activities, the aerodrome/airport operator should define relevant management responsibilities within its own organization.

(c) The ultimate responsibility for the product or service provided by contracted organizations should always remain with the aerodrome/airport operator.

GM2 ADR.OR.D.010 Contracted activities

RESPONSIBILITY WHEN CONTRACTING ACTIVITIES

(a) Regardless of the approval status of the contracted organization, the contracting aerodrome/airport operator is responsible to ensure that all contracted activities are subject to hazard identification, safety (risk) assessment and mitigation, as well as compliance monitoring.

(b) When the contracted organization is itself certified to carry out the contracted activities, the aerodrome/airport operator's compliance monitoring should at least check that the approval effectively covers the contracted activities, and that it is still valid.

AMC1 ADR.OR.D.015(a) Personnel requirements

ACCOUNTABLE MANAGER

(a) Accountable Manager — General

(1) The accountable manager should:

(i) ensure that all necessary resources are available to operate the aerodrome in accordance with the applicable requirements and the aerodrome manual;

(ii) ensure that if there is a reduction in the level of resources or abnormal circumstances which may affect safety, the required reduction in the level of operations at the aerodrome is implemented;

(iii) establish, implement, and promote the safety policy; and

(iv) ensure compliance with relevant applicable requirements, certification basis, and the organization's safety management system, as well as its quality management system with regard to aeronautical data and aeronautical information provision activities;

(v) be accepted by the CAA

(2) The accountable manager should have:

(i) an appropriate level of authority within the aerodrome/airport operator's organization to ensure that activities are financed and carried out to the standard required;

(ii) knowledge and understanding of the documents that prescribe relevant aerodrome safety standards;

(iii) understanding of the requirements for competence of aerodrome management personnel, so as to ensure that competent persons are in place;

(iv) knowledge and understanding of safety, quality, and security management systems related principles and practices, and how these are applied within the organization;

(v) knowledge of the role of the accountable manager; and

(vi) knowledge and understanding of the key issues of risk management within the aerodrome.

(b) Accountable manager — Delegation of responsibilities

(1) The technical knowledge and understanding expected by an accountable manager is high level, with particular reference to his/her own role in ensuring that standards are maintained.

(2) During periods of absence, the day-to-day responsibilities of the accountable manager may be delegated; however, the accountability ultimately remains with the accountable manager.

(3) Depending on the size and the complexity of operations, the accountable manager may delegate his/her responsibilities in the area of training, by nominating a training manager whose responsibilities should be the establishment, coordination, implementation of training programmes, and relevant record keeping of personnel training, as well as of the proficiency check programmes.

In any case, the accountability, ultimately, remains with the accountable manager.

GM1 ADR.OR.D.015(a) Personnel requirements

ACCOUNTABLE MANAGER

Depending on the size, structure and complexity of the organization, the accountable manager may be:

(a) the chief executive officer (CEO);

(b) the chief operating officer (COO);

(c) the chairperson of the board of directors;

(d) a partner; or

(e) the proprietor.

The appointment of an accountable manager who is given the required authorities and responsibilities, requires that the individual has the necessary attributes to fulfil the role. The accountable manager may have more than one function in the organization. Nonetheless, the accountable manager's role is to instill safety as a core organizational value, and to ensure that the safety management system is properly implemented and maintained through the allocation of resources and tasks.

AMC1 ADR.OR.D.015(b) Personnel requirements

NOMINATED PERSONS

(a) General

(1) A description of the functions of the nominated persons, including their names, as well as clearly defined responsibilities and authorizations, should be contained in the aerodrome manual. Nominated persons should have adequate resources available to perform their duties.

(2) The aerodrome/airport operator should make arrangements to ensure adequate continuity of supervision in the absence of nominated persons.

(3) The person nominated by the aerodrome/airport operator should not be nominated by another aerodrome/airport operator, unless agreed with the CAA.

(4) Persons nominated should be foreseen to work sufficient hours to fulfil the management functions associated with the scale and complexity of the operation.

(5) A nominated person may hold more than one of the nominated posts if such an arrangement is considered suitable and properly matched to the aerodrome/airport operator's organization, and the complexity of its operations.

(6) Nominated persons should be accepted by the CAA.

(b) Competence of nominated persons

The manager of Operational Services and the Maintenance manager should have:

(1) adequate practical experience and expertise in aerodrome operations or maintenance (or similar area) respectively;

(2) comprehensive knowledge of the applicable requirements in the area of aerodromes;

(3) appropriate level of knowledge of safety and quality management; and

(4) knowledge of the aerodrome manual.

GM1 ADR.OR.D.015(b) Personnel requirements

COMBINATION OF NOMINATED PERSONS RESPONSIBILITIES

(a) The acceptability of a single person holding more than one post, possibly in combination with being the accountable manager, should depend upon the aerodrome/airport operator's organization, and the complexity of its operations. The two main areas of concern should be competence, and an individual's capacity to meet his/her responsibilities.

(b) As regards competence in different areas of responsibility, there should not be any difference from the requirements applicable to persons holding only one post.

(c) The capacity of an individual to meet his/her responsibilities should primarily be dependent upon the complexity of the aerodrome/airport operator's organization and its operations. However, the complexity of the aerodrome/airport operator's organization, or of its operation may prevent, or limit, combinations of posts.

AMC1 ADR.OR.D.015(c) Personnel requirements

SAFETY MANAGER [detailed requirements applicable to the safety manager are contained in Regulation on Safety Management Systems (SMS) approved by the CAA.]

(a) The safety manager should be the focal point and responsible for the development, administration, and maintenance of an effective safety management system (see also AMC1 ADR.OR.D.005(b)(1)).

(b) The role of the safety manager should be to:

(1) facilitate hazard identification, risk analysis, and management;

(2) monitor the implementation and functioning of the safety management system, including the necessary safety actions;

(3) manage the safety reporting system of the aerodrome;

(4) provide periodic reports on safety performance;

(5) ensure maintenance of safety management documentation;

(6) ensure that there is safety management training available, and that it meets acceptable standards;

(7) provide advice on safety matters; and

(8) initiate and participate in internal occurrence/accident investigations.

(c) The safety manager should have:

(1) adequate practical experience and expertise in aerodrome operations, or aerodrome maintenance, or similar area;

(2) adequate knowledge of safety and quality management;

(3) adequate knowledge of the aerodrome manual; and

(4) comprehensive knowledge of the applicable requirements in the area of aerodromes.

(d) The safety manager should not be one of the persons referred to in ADR.OR.D.015(b) or AMC2 ADR.OR.D.005(b)(11). However, in the case of less than 20 full time employees, the safety manager may be the accountable manager.

AMC1 ADR.OR.D.015(d) Personnel requirements

DETERMINATION OF PERSONNEL NEEDS AND QUALIFICATIONS

(a) The aerodrome/airport operator should determine the required personnel for the planned tasks.

(b) The aerodrome/airport operator should determine the required personnel qualifications, in accordance with the applicable requirements (and the national legislation where applicable), and include them in the aerodrome manual. A documented system with defined responsibilities should be in place, in order to identify any needs for changes with regard to personnel qualifications.

GM1 ADR. OR.D.015(d) Personnel requirements

QUALIFICATION OF PERSONNEL

The term ‘qualified’ denotes fitness for the purpose. This may be achieved through fulfilment of the necessary conditions such as completion of required training, or acquisition of a diploma or degree, or through the gaining of suitable experience. It, also, includes the ability, capacity, knowledge, or skill that matches or suits an occasion, or makes someone eligible for a duty, office, position, privilege, or status.

Certain posts may, by nature, be associated with the possession of certain qualifications in a specific field (e.g. rescue and firefighting, civil, mechanical or electrical engineering, wildlife biology, etc.). In such cases, the person occupying such a post is expected to possess the necessary qualifications at a level that is in accordance with the applicable national legislation.

AMC1 ADR.OR.D.015(d);(e) Personnel requirements

DISTRIBUTION OF RULES AND PROCEDURES

The aerodrome/airport operator should have a system in place to distribute the rules and procedures to personnel to exercise their duties and responsibilities.

GM1 ADR.OR.D.015(d);(e) Personnel requirements

DISTRIBUTION MEANS OF RULES AND PROCEDURES

The aerodrome/airport operator may use electronic means, or conventional means to distribute rules and procedures to personnel. The method used should verify that the information reached the intended recipient.

AMC1 ADR.OR.D.017(a);(b) Training and proficiency check programmes

TRAINING PROGRAMME — GENERAL

(a) The training programme should cover all personnel:

(1) involved in the operation, maintenance, and management of the aerodrome (supervisors, managers, senior managers, and the accountable manager); and

(2) operating unescorted on the movement area, and other operational areas of the aerodrome, and which are related to the aerodrome/airport operator, or other organizations which operate or provide services at the aerodrome,

regardless of their level in the organization.

(b) The training of persons mentioned in paragraph (a) should be completed prior to the initial performance of their duties, or allowing them unescorted access on the movement area and other operational areas of the aerodrome, as appropriate.

(c) The training programme should include safety management system training whose level of detail should be appropriate to the individual's responsibility and involvement in the safety management system and should also include human and organizational factors; for those persons referred to in paragraph under (a)(2) employed by other organizations operating, or providing services at the aerodrome, the safety management system training may cover only the necessary elements (e.g. relevant procedures, safety reporting system, aerodrome safety programmes, etc.).

(d) The training programme should consist of the following:

(1) a process to identify training standards, including syllabi, and frequency for each type of training and area of activity for the persons mentioned in paragraph (a), including for instructors and assessors, and track completion of required training;

(2) a validation process that measures the effectiveness of training;

(3) initial job-specific training;

(4) on-the-job training; and

(5) recurrent training.

(e) The training programme should identify training responsibilities and contain procedures:

(1) for training and checking of the trainees;

(2) to be applied in the event that personnel do not achieve or maintain the required standards.

(f) Training contents and syllabi should comply with the requirements prescribed in ADR.OPS.

(g) A training file should be developed for each employee, including management, to assist in identifying and tracking employee training requirements, and verifying that personnel have received the planned training.

(h) Information related to paragraphs (d) and (e), including the identified training standards and the related syllabi and frequency, should be included in the aerodrome manual.

AMC2 ADR.OR.D.017(a);(b) Training and proficiency check programmes

TRAINING PROGRAMME — CHECKING OF TRAINEES

(a) Checking required for each training course should be accomplished by the method appropriate to the training element to be checked.

(b) Training elements that require individual practical participation may be combined with practical checks.

AMC3 ADR.OR.D.017(a);(b) Training and proficiency check programmes

RULES AND PROCEDURES

(a) The aerodrome/airport operator should ensure that personnel are aware of the rules and procedures relevant to operation of the aerodrome and the relationship of their duties and responsibilities to the aerodrome operation as a whole.

(b) Proficiency checks should verify that personnel are aware of the rules and procedures relevant to their duties and responsibilities.

GM1 ADR.OR.D.017(a);(b) Training and proficiency check programmes

TRAINING PROGRAMME — RECURRENT, REFRESHER, AND DIFFERENCES TRAINING

(a) Recurrent training

(1) The initial training should be valid for a period not exceeding 12 months. Thereafter, the aerodrome/airport operator should ensure that the persons mentioned under paragraph (a) of AMC1 ADR.OR.D.017(a);(b) complete recurrent training at intervals not exceeding 12 months since the initial completion of their training programme.

(2) If the recurrent training is undertaken within the last 3 calendar months of the 12-month period, the new validity period should be counted from the original expiry date.

(b) Refresher training

When a person mentioned under paragraph (a) of AMC1 ADR.OR.D.017(a);(b) has not performed any duties for a significant period before the expiry date of its initial training programme, or its last recurrent training (as the case may be), the aerodrome/airport operator should ensure that that person completes a relevant refresher training prior to:

(1) being assigned duties; or

(2) being allowed unescorted access on the movement area and other operational areas of the aerodrome, as appropriate.

(c) Differences training — same aerodrome/airport operator

The aerodrome/airport operator should ensure that aerodrome personnel mentioned under paragraph (a) of AMC1 ADR.OR.D.017(a);(b) who have already completed the necessary training programme, and are to be assigned to different duties, complete an appropriate training which covers any differences between their previous and future duties. The differences training should be determined, as necessary, on the basis of a comparison of the required training programme with the training programme already completed by the relevant personnel, taking into account the personnel's previous training as documented in his/her training records.

(d) Differences training — other aerodrome/airport operator

When aerodrome personnel mentioned under paragraph (a) of AMC1 ADR.OR.D.017(a);(b) who have already completed the necessary training programme,

are employed by another aerodrome/airport operator, the latter may establish a differences training for such personnel to complete. Such a differences training should be determined, as necessary, on the basis of a comparison of the training already completed by the relevant individual, (taking into account its previous training as documented in his/her training records) with the training programme that is required for the post that the person will cover. In any case, such a differences programme should not give credit for training areas which are aerodrome specific.

GM2 ADR.OR.D.017(a);(b) Training and proficiency check programmes

TRAINING PROGRAMME — CHECKING OF TRAINEES

The methods to be used for the checking of the trainees could include:

(a) practical demonstration,

(b) computer-based assessment,

(c) oral or written tests,

or combinations of such methods, as appropriate.

GM1 ADR.OR.D.017(c) Training and proficiency check programmes

PROFICIENCY CHECKS

(a) Proficiency checks should be conducted by nominated assessors in accordance with AMC1 ADR.OR.D.017(d).

(b) The maximum interval between two proficiency checks should not exceed 24 months.

The first proficiency check should be completed within two years since the completion of the initial training programme.

(c) The proficiency check programme should include a validation process that measures the effectiveness of the programme.

(d) The proficiency check programme should identify checking responsibilities and relevant checking methods, including procedures to be applied in the event that personnel do not achieve the required standards.

(e) Information related to the proficiency check programme should be included in the aerodrome manual.

GM2 ADR.OR.D.017(c) Training and proficiency check programmes

PROFICIENCY CHECKS

The purpose of the proficiency check is to establish the ability of an individual to perform satisfactorily, in accordance with applicable requirements and the content of the aerodrome manual. To this end, the elements that each proficiency check should cover should be identified.

A proficiency check does not need to cover all associated elements at the same time; however, all elements of a proficiency check should be covered within the period specified in GM1 ADR.OR.D.017(c).

The person(s) to be checked should be aware about the relevant procedure.

Proficiency checks may be conducted during normal and/or abnormal/emergency conditions depending on the situation and the specialty of the person being checked.

AMC1 ADR.OR.D.017(d) Training and proficiency check programmes

INSTRUCTORS — ASSESSORS

(a) The aerodrome/airport operator should nominate instructors and assessors to be used for the implementation of the training and proficiency check programmes. The personnel to be nominated may also include contracted instructors for individual subjects.

The aerodrome/airport operator may also nominate personnel proposed by organizations operating or providing services at the aerodrome to be used as instructors and assessors

for the implementation of the respective part of the training and proficiency check programmes of these organizations' personnel. In any case, the responsibility to ensure the proper implementation of the programme is with the aerodrome operator.

(b) A person may be qualified and nominated both as an instructor and as an assessor by the aerodrome/airport operator. However, such a person may not provide assessment for own instruction, courses, or material.

(c) Instructors

(1) Theoretical instruction should be given by appropriately qualified instructors. They should have:

(i) appropriate level and depth of knowledge in the field where instruction is to be given;

(ii) documented ability to use appropriate instructional techniques; and

(iii) adequate experience in the subject where instruction is to be given.

(2) Instruction on practical skills should be given by appropriately qualified instructors who:

(i) meet the theoretical knowledge, and the working experience requirements appropriate to the instruction being given;

(ii) have demonstrated the ability to instruct, and to use appropriate instructional techniques;

(iii) are proficient in instructional techniques in the areas in which it is intended to provide instruction; and

(iv) receive regular refresher training to ensure that the instructional competences are maintained.

(d) Assessors

The persons who are responsible for assessing the competence and skills of the personnel should:

(1) have demonstrated the ability to assess the performance of, and conduct tests and checks in the areas covered by the training;

(2) receive regular refresher training to ensure that the assessment standards are maintained up to date; and

(3) meet the theoretical knowledge requirements appropriate to the instruction being given and have adequate working experience in the area of instruction.

AMC1 ADR.OR.D.017(e) Training and proficiency check programmes

PERSONNEL RECORDS

(a) The aerodrome/airport operator should use its record keeping system (see AMC1 ADR.OR.D.035) to record the following information for each person:

(1) starting date of employment/ending date of employment (if applicable);

(2) area of activity;

(3) previous working experience;

(4) qualifications;

(5) training (before entry and subsequent); and

(6) proficiency checks, including language proficiency as appropriate;

(b) Latest changes should be reflected into personnel records.

GM1 ADR.OR.D.017(e) Training and proficiency check programmes

TRAINING RECORDS

(a) Training programme — general

The aerodrome/airport operator should maintain records of the training sessions that it has provided, including as a minimum the following:

(1) area of training and subjects covered;

(2) names of participants/signed list of participants;

(3) date and duration of training; and

(4) name of the instructor.

(b) Training records of individuals

The training records maintained for each individual should include as a minimum:

(1) the name of the trainee;

(2) the date(s) and the duration of the training;

(3) the place where the training was received;

(4) the name of the organization that provided the training;

(5) the subjects covered, and the methodology of the course;

(6) any comments made by the instructor if applicable;

(7) the performance evaluation of the trainee if applicable; and

(8) the name and signature of the instructor.

GM2 ADR.OR.D.017(e) Training and proficiency check programmes

PROFFICIENCY CHECK RECORDS

The proficiency check records maintained for each individual should include as a minimum:

(a) the name of the person checked;

(b) the date(s) and the duration of the proficiency check;

(c) the methodology of the check conducted;

(d) any comments made by the assessor;

(e) the performance evaluation of the person checked; and

(f) the name and signature of the assessor.

GM1 ADR.OR.D.020(a) Facilities requirements

FACILITIES TO BE PROVIDED

Facilities should be provided to allow the performance of all tasks and activities in accordance with the applicable requirements. This includes, but is not limited to:

(a) adequate offices, working space, and office equipment;

(b) personnel protective equipment;

(c) equipment necessary for inspecting the aerodrome and its facilities, such as clinometers, distance measurement devices, etc.; and

(d) access to data sources necessary for the development and effective functioning of the safety management system and compliance monitoring of the aerodrome.

AMC1 ADR.OR.D.020(b) Facilities requirements

Designated areas may vary and include facilities such as cargo areas, or even open-air areas.

Aircraft stands should also be designated for aircrafts that carry dangerous goods.

GM1 ADR.OR.D.025 Coordination with other organizations

COORDINATION OF SAFETY PROCEDURES

Coordination and interface with the safety procedures of other relevant organizations that are active at the aerodrome include, but is not limited to the following: aircraft operators, air

navigation service providers, providers of apron management services, ground handling service providers, providers of services to persons with reduced mobility, aircraft maintenance organizations, flying training organizations, public authorities that operate on the movement area, as well as other organizations that perform activities independently at the aerodrome.

GM2 ADR.OR.D.025 Coordination with other organizations

COMPLIANCE OF OTHER ORGANIZATIONS

In order to ensure compliance of the organizations operating or providing services at the aerodrome, with the requirements of the Aviation Code and Implementing Rules that are applicable to aerodromes and their operators, as well as with the content of the aerodrome manual, the aerodrome/airport operator should:

(a) conduct audits and inspections of such organizations through its compliance monitoring; and

(b) establish procedures for the monitoring of related activities at the aerodrome.

AMC1 ADR.OR.D.027 Safety programmes

SAFETY PROGRAMMES — AERODROME SAFETY COMMITTEES

(a) The aerodrome/airport operator should:

(1) organize, coordinate and implement programmes to promote safety at the aerodrome. Such programmes should include, but are not limited to:

(i) runway safety, including runway incursion and excursion prevention;

(ii) apron safety; and

(iii) FOD prevention;

(2) coordinate and promote the exchange of information, and the joint investigation of occurrences, serious incidents, and accidents.

(b) The aerodrome/airport operator should establish, coordinate, and lead local aerodrome safety committees, and a Local Runway Safety Team, dealing with runway safety, apron safety, and the safety of the operations at the aerodrome in general. All relevant organizations operating or providing services at the aerodrome should participate to such aerodrome safety committees and the Local Runway Safety Team.

The local aerodrome safety committees and the Local Runway Safety Team should convene regularly, identify and review local safety issues, and examine possible solutions, and need for action. Minutes of such meetings should be kept. Procedures relevant to the functioning of local aerodrome safety committees and the Local Runway Safety Team should be included in the aerodrome manual.

AMC2 ADR.OR.D.027 Safety programmes

HOT SPOTS

Once hot spots have been identified at an aerodrome, suitable strategies should be implemented to remove the hazard and, when this is not immediately possible, to manage and mitigate the risk, including the publication of HOT SPOT charts in the Aeronautical Information Publication.

GM1 ADR.OR.D.027 Safety programmes

AERODROME SAFETY COMMITTEES

(a) Manoeuvring area/Apron Safety Committee

(1) The aerodrome/airport operator should establish (a) Manoeuvring area/Apron Safety Committee(s);

(2) The Manoeuvring area/Apron Safety Committee(s) should have an advisory role to the aerodrome/airport operator;

(b) Management of Manoeuvring area /Apron Safety Committee(s)

(1) The Manoeuvring area /Apron Safety Committee(s) should be chaired by an aerodrome/airport operator's official, responsible for aerodrome operations; and

(2) The aerodrome/airport operator's safety manager should act as the secretary of the Committee(s).

(c) Composition of Manoeuvring area /Apron Safety Committee(s)

Participation should include, but not limited to representatives of:

(1) aerodrome users active in flight operations;

(2) aircraft ground handling services providers;

(3) aerodrome rescue and firefighting services;

(4) aerodrome operations;

(5) aerodrome wildlife management;

(6) aerodrome maintenance; and

(7) air navigation service provider(s).

(d) Tasks

The tasks of the Manoeuvring area /Apron Safety Committee(s) should be:

(1) to receive and evaluate reports on operational safety issues;

(2) to receive reports and statistical information on accidents and incidents, and propose solutions;

(3) to advise on manoeuvring area/apron safety issues such as:

(i) promotion of apron safety discipline;

(ii) FOD prevention;

(iii) developing measures for safe operations;

(iv) considering actions to resolve manoeuvring area/apron safety problems;

(v) apron equipment issues;

(vi) adherence to vehicle traffic issues;

(vii) new and/or updated safety instructions;

(viii) personal protective clothing/equipment issues;

(ix) methods to develop and promote apron safety awareness initiatives,

(x) snow and ice clearance issues;

(xi) proposed aerodrome works;

(xii) proposed changes/developments to the movement area;

(xiii) standard operating procedures, etc.

GM2 ADR.OR.D.027 Safety programmes

LOCAL RUNWAY SAFETY TEAM

(a) Context

As part of its runway safety programme, the aerodrome/airport operator should establish and lead a Local Runway Safety Team and act on local runway safety issues, including runway incursion (including runway confusion) and excursion prevention.

A runway incursion is defined as 'Any occurrence at an aerodrome involving the incorrect presence of an aircraft, vehicle, or person on the protected area of a surface designated for the landing and take-off of aircraft [*].'

[*] Rem. The 'protected area of a surface designated for the landing and take-off of aircraft' is to be interpreted as the physical surface of a runway, from the

centreline to the holding point appropriate to the type of runway. Where operations are being conducted during low visibility operations this should be the holding point appropriate to the procedures in force. The 'protected surface' includes the ILS glide-path and localiser critical areas at all times, and the ILS sensitive areas during low visibility procedures.

A runway excursion occurs when 'An aircraft veers off or overruns the runway surface during either take-off or landing'.

(b) Local Runway Safety Team composition

Participation should include representatives from all interested parties with direct involvement in runway operations at the aerodrome, including, but is not limited, to:

(1) aerodrome operations;

(2) aerodrome engineering and maintenance;

(3) air navigation service providers;

(4) aircraft operators that operate of the aerodrome;

(5) aerodrome rescue and firefighting services;

(6) drivers having access on the manoeuvring area.

(c) Role

The role of the Local Runway Safety Team should be to advise the appropriate management on potential runway safety issues, and to recommend mitigating measures.

(d) Tasks

The Local Runway Safety Team may have the following tasks:

(1) identification of potential runway safety issues, including the need for establishment of hot spots or other problem areas at the aerodrome and the review of the relevant entries of the AIP for accuracy;

(2) developing and running local awareness campaigns, at suitable periods, including at the start of a busy season or before an unusual event, that focus on local issues, for example, producing and distributing local hot spot maps, or other guidance material considered as necessary; local awareness campaigns should be periodically refreshed to maintain interest and operational awareness of the relevant personnel;

(3) monitoring the number, type and, the severity of runway incursions; disseminating safety recommendations delivered from accident and incident investigation findings as well as other relevant lessons learned e.g. from operational experience and best risk mitigation practices; sharing good practices to prevent runway incursions or excursions;

(4) assisting in verifying that communications between air traffic controllers, or other Air Traffic Services personnel, pilots, and vehicle drivers are satisfactory, or if any improvements could be suggested;

(5) making observations on a regular basis in different weather and light conditions to assess whether all runway entrances and visual aids are adequate, correctly located and understandable by all parties concerned, with no possible ambiguity of their meaning, or identify potential aerodrome design issues;

(6) understanding the operating difficulties of personnel working in other areas, and recommending areas for improvement; when reviewing operating procedures it is necessary to ensure that the procedures employed by different companies at the aerodrome are integrated and effective, so as to minimize the risk of runway incursions. Care should be taken when examining existing or proposed runway

capacity enhancing procedures or noise abatement schemes involving runway preferential systems;

(7) development of joint, initial and recurrent, training programmes and familiarization on runway incursion and excursion prevention, for all relevant personnel (vehicle drivers and other personnel operating on the manoeuvring area, pilots, Air Traffic Services personnel); this may include visits to the manoeuvring area to increase awareness of the aerodrome layout, markings, signs, position of anemometers etc., where this is considered necessary;

(8) providing advice prior to the implementation of changes to the aerodrome, practices and procedures to identify potential for runway incursion or excursion; and

(9) assessing the effectiveness of implemented operational solutions periodically.

GM3 ADR.OR.D.027 Safety programmes

HOT SPOTS

A hot spot is defined as 'a location on an aerodrome movement area with a history, or potential risk of collision, or runway incursion, and where heightened attention by pilots/drivers is necessary.'

Strategies to manage and mitigate the risk from hot spots, depending on the case, may include, but are not limited to:

(a) awareness campaigns;

(b) additional visual aids (signs, markings, and lighting);

(c) establishment of alternative routings;

(d) introducing changes to the design of parts of the aerodrome; and

(e) the mitigation of blind spots in the aerodrome control tower.

Aerodrome charts showing hot spots should be produced locally, checked regularly for accuracy, revised as needed, distributed locally, and published in the AIP Moldova. The criteria used to establish and chart a hot spot are contained in the PANS-ATM (Chapter 7) and Technical requirements "Aeronautical charts (Chapters 13, 14 and 15), approved by the CAA.

Examples of how hot spots are shown on charts are provided in Figures 1, 2, and 3 below.

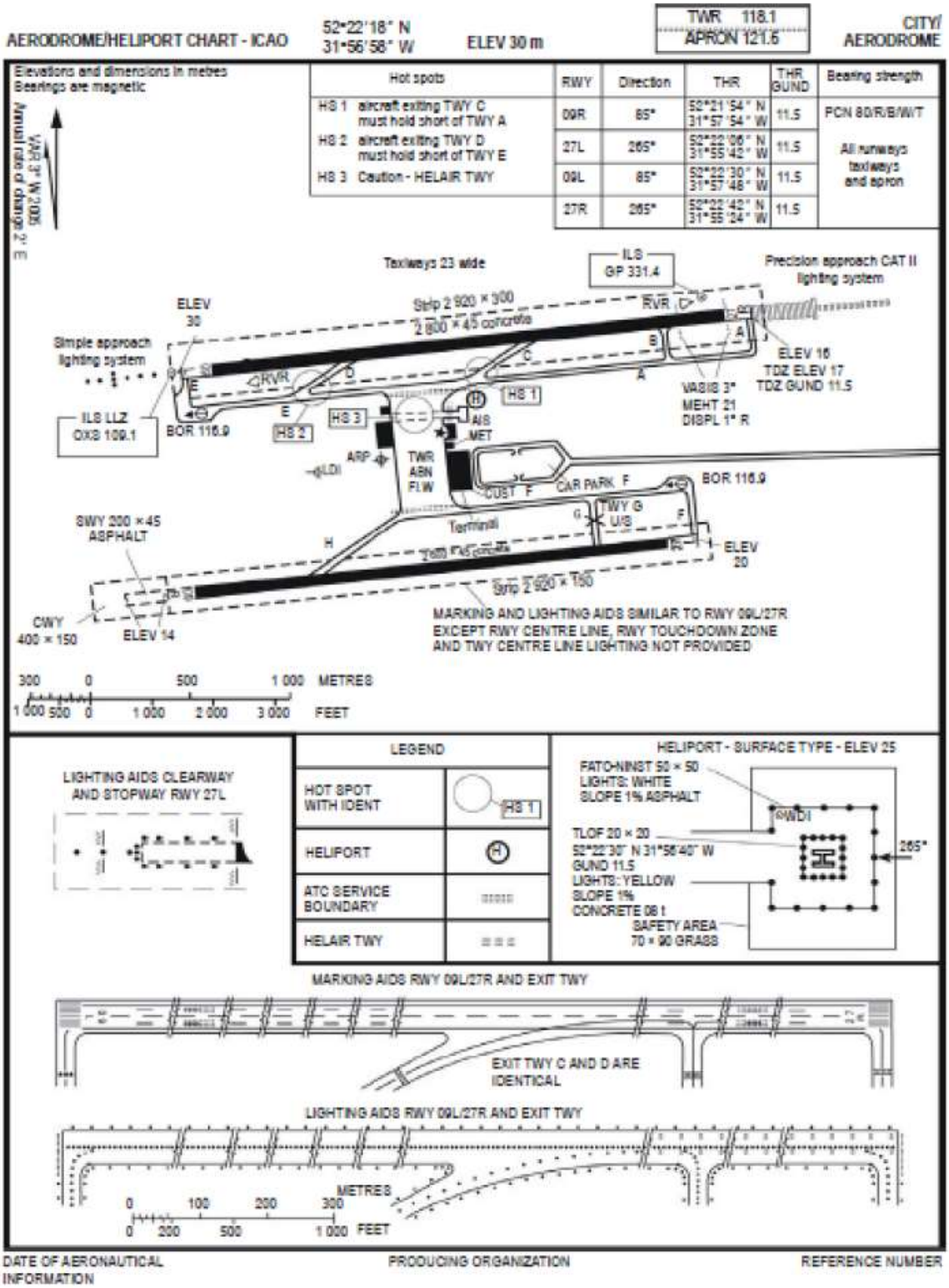

AERODROME/HELIPORT CHART - ICAO
52°22'18" N
31°56'58" W
ELEV 30 m
TWR 118.1
APRON 121.6
CITY/ AERODROME
Elevations and dimensions in metres
Bearings are magnetic
Annual rate of change 2°E
Hot spots
HS 1 aircraft exiting TWY C must hold short of TWY A
HS 2 aircraft exiting TWY D must hold short of TWY E
HS 3 Caution - HELAIR TWY
RWY
Direction
THR
THR GUND
Bearing strength
09R 85° 52°21'54" N 31°57'54" W 11.5
27L 265° 52°22'06" N 31°55'42" W 11.5
09L 85° 52°22'30" N 31°57'48" W 11.5
27R 265° 52°22'42" N 31°55'24" W 11.5
PCN 80/R/B/W/T
All runways taxiways and apron
Taxiways 23 wide
ILS GP 331.4
Precision approach CAT II lighting system
ELEV 30
Strip 2 920 × 300
2 800 × 45 concrete
Simple approach lighting system
RVR
ELEV 16
TDZ ELEV 17
TDZ GUND 11.5
VASIS 3°
MEHT 21
DISPL 1° R
ILS LLZ
OXB 109.1
BOR 116.9
HS 1
HS 2
HS 3
AIS
MET
ARP
TWR
ABN
FLW
CUST
CAR PARK
SWY 200 × 45
ASPHALT
Terminal
WY G
U/S
ELEV 20
CWY
400 × 150
ELEV 14
MARKING AND LIGHTING AIDS SIMILAR TO RWY 09L/27R
EXCEPT RWY CENTRE LINE, RWY TOUCHDOWN ZONE
AND TWY CENTRE LINE LIGHTING NOT PROVIDED
300 0 500 1 000 METRES
1 000 500 0 1 000 2 000 3 000 FEET
LIGHTING AIDS CLEARWAY AND STOPWAY RWY 27L
LEGEND
HOT SPOT WITH IDENT
HELIPORT
ATC SERVICE BOUNDARY
HELAIR TWY
HELIPORT - SURFACE TYPE - ELEV 25
FATO NINST 50 × 50
LIGHTS: WHITE
SLOPE 1% ASPHALT
WADI
TLOF 20 × 20
52°22'30" N 31°56'40" W
GUND 11.5
LIGHTS: YELLOW
SLOPE 1%
CONCRETE 08 t
SAFETY AREA
70 × 90 GRASS
265°
MARKING AIDS RWY 09L/27R AND EXIT TWY
EXIT TWY C AND D ARE IDENTICAL
LIGHTING AIDS RWY 09L/27R AND EXIT TWY
METRES
0 100 200 300
0 200 500 1 000 FEET
DATE OF AERONAUTICAL INFORMATION
PRODUCING ORGANIZATION
REFERENCE NUMBER

Figure 1

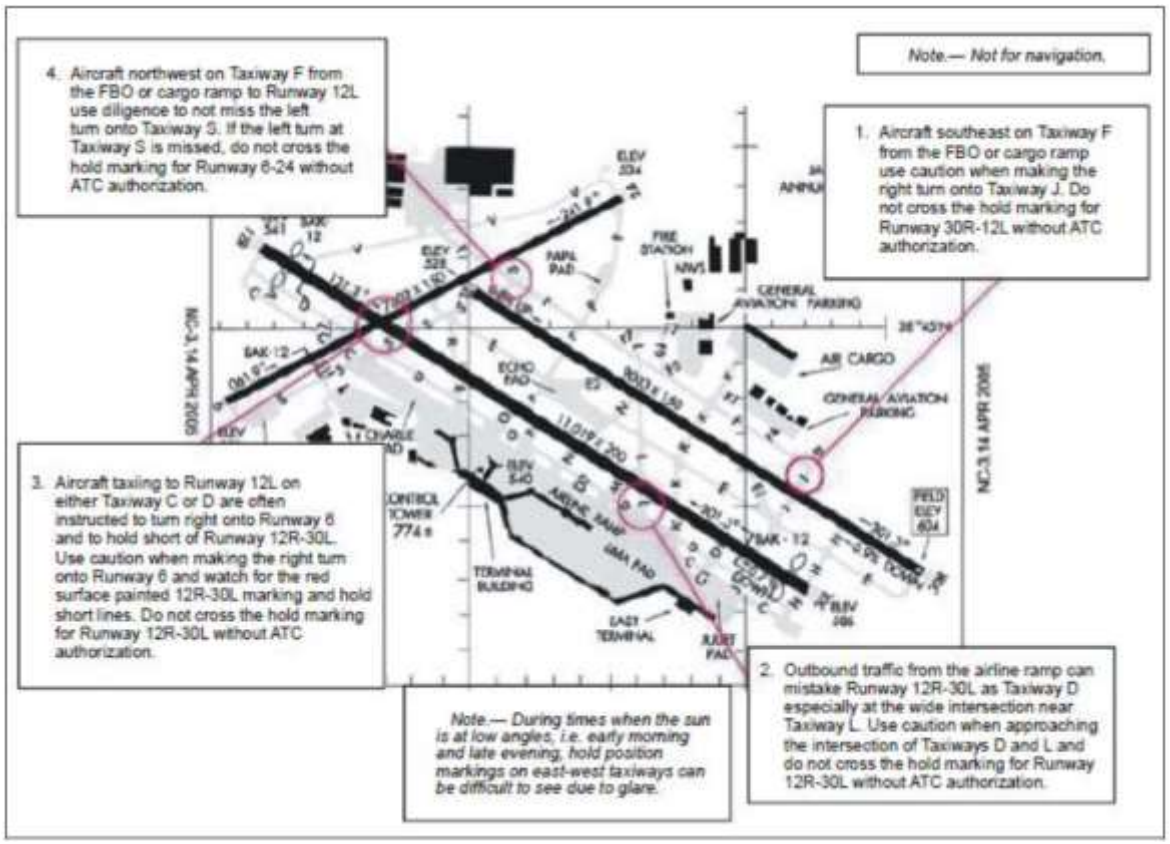


Figure 2

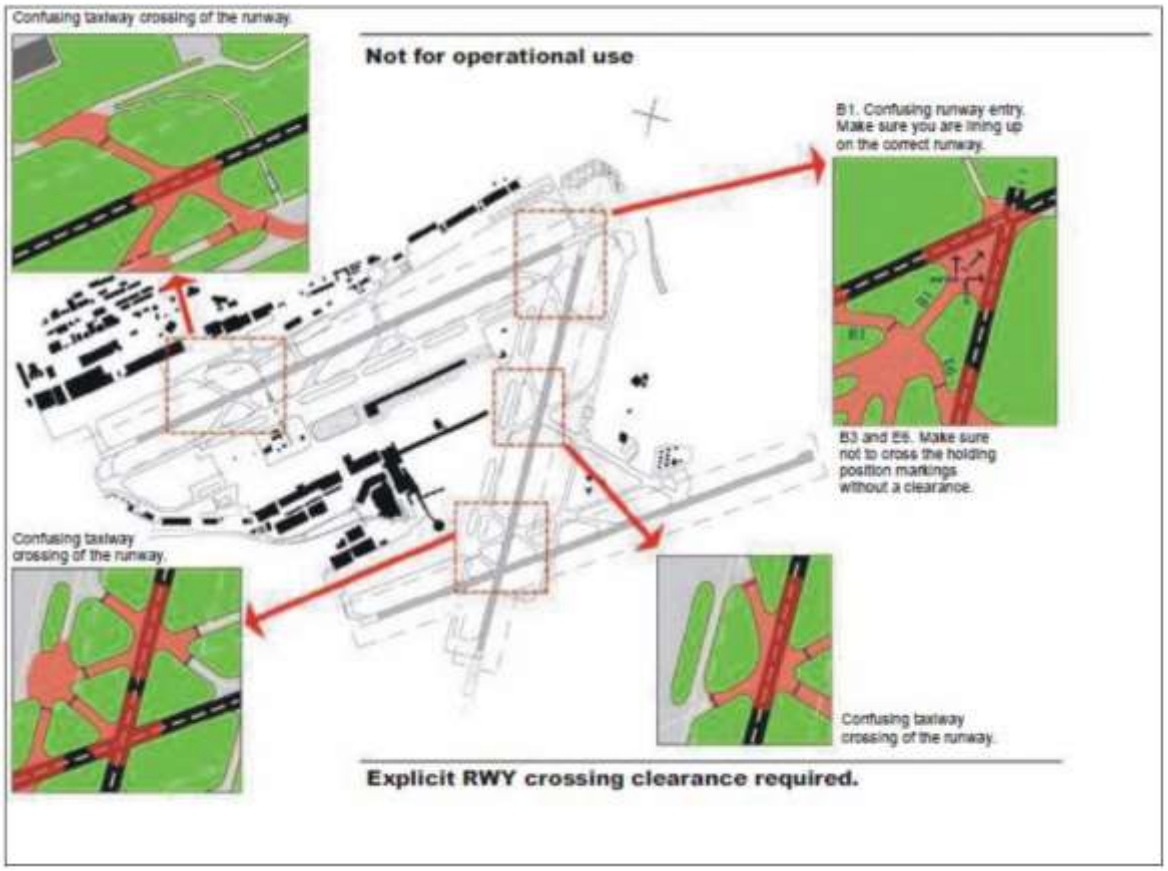


Figure 3

AMC1 ADR.OR.D.030 Safety reporting system

SAFETY REPORTING SYSTEM

(a) Safety reporting system — General

(1) An effective safety reporting system should include, apart from aerodrome/airport operator's personnel, aircraft operators, ground handling service providers, air navigation service providers, and any other organization operating on the aerodrome, or providing services at the aerodrome.

(2) The safety reporting system should include voluntary reporting possibilities intended for safety hazards identified by the reporter, and that may have potential safety consequences.

(3) The aerodrome/airport operator should identify which events are mandatory to be reported.

(4) The aerodrome/airport operator should provide the means and the format for reporting which should be such that meets the existing reporting requirements foreseen in the applicable legislation in terms of time, format, and required information to be reported.

(5) The safety reporting system should include an acknowledgement to the reporter for the submission of the report.

(6) The reporting process should be as simple as possible, and well documented, including details as to what, how, where, whom, and when to report;

(7) Regardless of the source or method of submission, once the information is received, it should be stored in a manner suitable for easy retrieval and analysis;

(8) Access to the submitted reports should be restricted to persons responsible for storing and analyzing them;

(9) Protection of the identity of the reporter should be ensured, and the procedures established by the aerodrome/airport operator to gather additional information for analyses, or investigations should respect this principle;

(10) The safety reporting system should include a feedback system to the reporting person, on the outcome of the occurrence analysis.

(b) Wildlife hazard reporting

(1) The aerodrome/airport operator should ensure that its safety reporting system specifically addresses the requirement for all third parties (aircraft operators, aircraft mechanics, air traffic controllers, and other Air Traffic Services personnel, etc.) and all aerodrome personnel, to report to the aerodrome/airport operator wildlife strikes, and relevant identified hazards.

(2) The reporting of such third parties should be done irrespectively of any other requirements according to which they have to report to the CAA, or the state of registry of the aircraft involved, or any other Competent Authority in the context of the national occurrence reporting programme.

GM1 ADR.OR.D.030 Safety reporting system

NEED FOR SAFETY REPORTING

(a) The overall purpose of the safety reporting system is to use reported information to improve the level of safety performance of the aerodrome, and not to attribute blame.

(b) The objectives of the safety reporting system should be:

(1) to enable an assessment to be made of the safety implications of each relevant occurrence, serious incident and accident, including previous similar events, so that any necessary action can be initiated; and

(2) to ensure that knowledge of relevant occurrences, serious incidents and accidents is disseminated, so that other persons and organizations may learn from them.

AMC1 ADR.OR.D.035 Record keeping

DOCUMENTATION TO BE RETAINED

(a) The system employed by the aerodrome/airport operator for record keeping should provide for adequate procedures, storage facilities, and reliable traceability, retrievability and accessibility of the records related to the activities of the aerodrome/airport operator that are subject to the Aviation Code and Implementing Rules, throughout the required retention period.

(b) Records should be kept in paper form, or in electronic format, or a combination of both. Records stored on microfilm or optical disc format are also acceptable. The records should remain legible throughout the required retention period. The retention period starts when the record has been created or last amended.

(c) Paper systems should use robust material which can withstand normal handling and filing. Computer systems should have at least one backup system which should be updated within 24 hours of any new entry. Computer systems should include safeguards against the ability of unauthorized personnel to alter the data.

(d) All computer hardware used to ensure data backup should be stored in a different location from that containing the working data, and in an environment that ensures they remain in good condition. When hardware or software changes take place, special care should be taken that all necessary data continues to be accessible, at least, through the full retention period. In the absence of any indication, all records should be kept for a minimum period of five years.

AMC2 ADR.OR.D.035 Record keeping

RECORDING OF AIRCRAFT MOVEMENTS

(a) The aerodrome/aircraft operator should employ a system to be used for recording the aircraft movements at the aerodrome.

(b) Such a system should allow the aerodrome/airport operator to record:

(1) the number of movements of each aircraft type using the aerodrome;

(2) the type of each aircraft movement (commercial air transportation, cargo, etc.);

(3) the date of each movement; and

(4) the number of passengers.

(c) The system used should also satisfy the provisions of AMC1 ADR.OR.D.035.

GM1 ADR.OR.D.035(b) Record keeping

RECORDS

Microfilming or optical storage of records may be carried out at any time. The records should be as legible as the original record, and remain so for the required retention period.

SUBPART E — AERODROME MANUAL (ADR.OR.E)

AMC1 ADR.OR.E.005 Aerodrome manual

GENERAL

(a) The aerodrome manual may vary in detail according to the complexity of the operation, and the type of the aerodrome.

(b) The aerodrome manual or parts of it may be presented in any form, including electronic form. In all cases, the accessibility, usability, and reliability should be assured.

(c) The aerodrome manual should be such that:

(1) all parts of the manual are consistent and compatible in form and content;

(2) the manual can be readily amended; and

(3) the content and amendment status of the manual is controlled and clearly indicated.

(d) The aerodrome manual should include a description of its amendment and revision process specifying:

(1) the person(s) who may approve amendments or revisions;

(2) the conditions for temporary revisions and/or immediate amendments, or revision required in the interest of safety; and

(3) the methods by which all personnel and organizations are advised of changes to the aerodrome manual.

(e) The aerodrome manual may contain parts of, or refer to other controlled documents, such as aerodrome equipment manual, which are available at the aerodrome for use by the personnel.

AMC2 ADR.OR.E.005(i)(2) Aerodrome manual

LANGUAGE OF THE AERODROME MANUAL

A translated version of the relevant parts of the aerodrome manual is an acceptable means to comply with the relevant requirement. In any case, the persons who are going to use the manual should be able to read and understand it.

AMC3 ADR.OR.E.005 Aerodrome manual

AERODROME MANUAL

(a) The aerodrome manual should have the following structure, and include, at least, the following information; if an item is not applicable, the indication 'Not applicable' or 'Intentionally blank' should be inserted, along with the relevant reason:

A. PART A — GENERAL

0. Administration and control of the aerodrome manual including the following:

0.1. Introduction:

0.1.1 a statement signed by the accountable manager that the aerodrome manual complies with all applicable requirements, and with the terms of the certificate;

0.1.2 a statement signed by the accountable manager that the aerodrome manual contains operational instructions that are to be complied with by the relevant personnel;

0.1.3 a list and brief description of the various parts, their contents, applicability, and use;

0.1.4 explanations, abbreviations, and definitions of terms needed for the use of the manual;

0.2 System of amendment and revision:

0.2.1 details of the person(s) responsible for the issuance and insertion of amendments and revisions;

0.2.2 a record of amendments and revisions with insertion dates, and effective dates;

0.2.3 a statement that handwritten amendments and revisions are not permitted, except in situations requiring immediate amendment, or revision in the interest of safety;

0.2.4 a description of the system for the annotation of pages, or paragraphs and their effective dates;

0.2.5 a list of effective pages or paragraphs;

0.2.6 annotation of changes (in the text and, as far as practicable, on charts and diagrams);

0.2.7 temporary revisions; and

0.2.8 description of the distribution system and a distribution list for the aerodrome manual, its amendments, and revisions.

1. General information

General information including the following**:**

1.1 purpose and scope of the aerodrome manual;

1.2 legal requirements for an aerodrome certificate and the aerodrome manual as prescribed in ADR.OR;

1.3 conditions for use of the aerodrome by its users;

1.4 the obligations of the aerodrome/airport operator; rights of the CAA and guidance to staff on how to facilitate audits/inspections by CAA personnel.

B. PART B — AERODROME MANAGEMENT SYSTEM, QUALIFICATION AND TRAINING REQUIREMENTS

2. A description of the management system, including the following:

2.1 Aerodrome organization and responsibilities including the following: a description of the organizational structure, including the general organogram and other departments' organograms. The organogram should depict the relationship between the departments. Subordination and reporting lines of all levels of organizational structure (Departments, Sections, etc.) related to safety should be shown.

Names, authorities, responsibilities, and duties of management and nominated persons; responsibilities and duties of other operational, maintenance personnel, as well of the aerodrome safety committees and the Local Runway Safety Team and their functioning, should also be included.

2.2. A description of the safety management system, including:

2.2.1 scope of the safety management system;

2.2.2 safety policy and objectives;

2.2.3 safety responsibilities of key safety personnel;

2.2.4 documentation control procedures;

2.2.5 safety risk management process, including hazard identification and risk assessment schemes;

2.2.6 monitoring of implementation and effectiveness of safety actions, and risk mitigation measures;

2.2.7 safety performance monitoring;

2.2.8 safety reporting (including hazard reporting) and investigation;

2.2.9 emergency response planning;

2.2.10 management of change (including organizational changes with regard to safety responsibilities);

2.2.11 safety promotion; and

2.2.12 safety management system outputs.

2.3 A description of the compliance monitoring and related procedures.

2.4 A description of the quality management system for aeronautical data and aeronautical information provision activities and related procedures, including those for meeting the relevant safety, and security management objectives.

2.5 Procedures for reporting to the CAA and to the authority responsible for investigation of aeronautical incidents and accidents including handling, notifying and reporting accidents, serious incidents, and occurrences. This section should include, at least, the following:

(a) definition of accident, serious incident and occurrence and of the relevant responsibilities of all persons involved;

(b) illustrations of forms to be used (or copies of the forms themselves), instructions on how they are to be completed, the addresses to which they should be sent and the time allowed for this to be done;

(c) procedures and arrangements for the preservation of evidence, including recordings, following a reportable event;

2.6 Procedures related to the use of alcohol, psychoactive substances and medicines.

2.7 Procedures for:

2.7.1 complying with safety directives;

2.7.2 reaction to safety problems; and

2.7.3 handling of safety recommendations issued by Safety Investigation Authorities.

2.8 A description of the method and procedures for recording aircraft movements, including movement and aircraft type, dates, and number of passengers.

3. Required aerodrome personnel qualifications (see GM1 ADR. OR.D.015 (d)). Moreover, procedures related to:

3.1 the training programme, including the following:

3.1.1 responsibilities, frequencies, syllabi, and the identified training standards for all personnel involved in the operation, rescue and firefighting maintenance and management of the aerodrome, and those persons operating unescorted on the movement area and other operational areas of the aerodrome.

3.1.2 procedures:

3.1.2.1 for training and checking of the trainees;

3.1.2.2 to be applied in the event that personnel do not achieve the required standards.

3.1.3 description of documentation to be stored and storage periods.

3.2 the proficiency check programme, including responsibilities and frequencies;

3.2.1 procedures to be applied in the event that personnel do not achieve the required standards.

3.2.3 description of documentation to be stored and storage periods.

C. PART C — PARTICULARS OF THE AERODROME SITE

4. A description of the aerodrome site including in particular, the following information:

4.1 a plan showing the distance of the aerodrome from the nearest city, town, or other populous area;

4.2 detailed maps and charts of the aerodrome showing the aerodrome's location (longitude and latitude) and boundaries, major facilities, aerodrome reference point, layout of runways, taxiways and aprons, aerodrome visual and non-visual aids, and wind direction indicators;

4.3 a plan showing the location of any aerodrome facilities and equipment outside the boundaries of the aerodrome;

4.4 description of the physical characteristics of the aerodrome, elevations, visual and non-visual aids, as well as the information regarding the aerodrome reference temperature, strength of pavements, rescue and firefighting level of protection, ground aids and main obstacles;

4.5 description of any cases of exemptions or derogations, equivalent level of safety, special conditions, and operating limitations; and

4.6 description of the types of operations that the aerodrome is approved to conduct.

D. PART D — PARTICULARS OF THE AERODROME REQUIRED TO BE REPORTED TO THE AERONAUTICAL INFORMATION SERVICE

5. The aeronautical information services available and the procedures for the promulgation of general information, including the following:

5.1 the name of the aerodrome;

5.2 the location of the aerodrome;

5.3 the geographical coordinates of the aerodrome reference point determined in terms of the World Geodetic System — 1984 (WGS-84) reference datum;

5.4 the aerodrome elevation and geoid undulation;

5.5 the elevation of each threshold and geoid undulation, the elevation of the runway end, and any significant high and low points along the runway, and the highest elevation of the touchdown zone of a precision approach runway;

5.6 the aerodrome reference temperature;

5.7 details of the aerodrome beacon; and

5.8 the name of the aerodrome operator and contact details (including telephone numbers) of the aerodrome operator at which may be contacted at all times.

6. Aerodrome dimensions and related information, inducing the following:

6.1 runway — true bearing, designation number, length, width, displaced threshold location, slope, surface type, type of runway and, for a precision approach runway, the existence of an obstacle free zone;

6.2 length, width and surface type of strip, runway end safety areas, stopways; length, width and surface type of taxiways; apron surface type and aircraft stands; clearway length and ground profile;

6.3 visual aids for approach procedures, approach lighting type and visual approach slope indicator system; marking and lighting of runways, taxiways, and aprons; other visual guidance and control aids on taxiways and aprons,

location and type of visual docking guidance system; availability of standby power for lighting;

6.4 the location and radio frequency of VOR aerodrome checkpoints;

6.5 the location and designation of standard taxi routes;

6.6 the geographical coordinates of each threshold, appropriate taxiway centre line points, and aircraft stands;

6.7 the geographical coordinates, and the top elevation of significant obstacles in the approach and take-off areas, in the circling area and in the surroundings of the aerodrome (in the form of charts);

6.8 pavement surface type and bearing strength using the Aircraft Classification Number — Pavement Classification Number (ACN-PCN) method;

6.9 pre-flight altimeter check locations established and their elevation;

6.10 declared distances;

6.11 contact details (telephone/telex/fax numbers and e-mail address) of the aerodrome coordinator for the removal of disabled aircraft, and information on the capability to remove disabled aircraft, expressed in terms of the largest aircraft type;

6.12 rescue and firefighting level of protection; types and amounts of extinguishing agents normally available at the aerodrome; and

6.13 exemptions or derogations from the applicable requirements, cases of equivalent level of safety, special conditions, and limitations.

E. PART E — PARTICULARS OF OPERATING PROCEDURES OF THE AERODROME, ITS EQUIPMENT, AND SAFETY MEASURES

7. Aerodrome reporting, including:

7.1 arrangements and procedures for reporting changes to the aerodrome information set out in the AIP Moldova and requesting the issue of NOTAM, including reporting changes to the CAA and recording of the reporting of changes;

7.2 procedures and frequencies for aeronautical data surveying, including areas to be surveyed.

8. Procedures for accessing the aerodrome movement area, including:

8.1 coordination with the security agencies;

8.2 prevention of unauthorized entry into the movement area;

9. Procedures for the inspection, assessment and reporting of the condition of the aerodrome movement area and other operational areas and facilities, (including runway surface friction characteristics assessments and water-depth measurements), including:

9.1 arrangements and means of communicating with the air traffic services unit during inspections;

9.2 inspection checklists, logbook, and record-keeping; and

9.3 inspection intervals and times; reporting results and follow-up actions.

10. Procedures for the inspection, and routine and emergency maintenance of visual and non-visual aids, as appropriate, and the aerodrome electrical systems, including:

10.1 inspection checklists, logbook, and record keeping; and

10.2 inspection intervals and times; reporting results and follow-up actions.

11. Operating, maintenance and repair instructions, servicing information, troubleshooting and inspection procedures of aerodrome equipment.

12. Procedures for:

12.1 maintenance of the movement area, including paved areas; unpaved runways and taxiways; runways and runway strips and aerodrome drainage;

12.2 overload operations.

13. Procedures for aerodrome works, including:

13.1 coordinating, planning, and carrying out construction and maintenance work; and

13.2 arrangements and means of communicating with air traffic services unit during the progress of such work.

14. Procedures for apron management, including:

14.1 transfer of the aircraft between air traffic services unit, and the apron management unit;

14.2 allocation of aircraft parking positions;

14.3 engine start and aircraft push-back; and

14.4 marshalling and 'follow-me' service.

15. Procedures for apron safety management, including:

15.1 protection from jet blasts;

15.2 enforcement of safety precautions during aircraft refuelling operations;

15.3 FOD prevention, including apron cleaning/sweeping; and

15.4 monitoring compliance of personnel on the apron with safety procedures.

16. Procedures for the control of vehicles operating on or in the vicinity, or the movement area, including traffic rules, right of way, speed limits, and method for issuing driving permits, and enforcement means.

17. Procedures for wildlife hazard management, including assessing wildlife hazards and arrangements for implementation of the wildlife control programme, and promulgation of the relevant information to the AIS; wildlife strike form.

18. Procedures for:

18.1 obstacle control and monitoring within and outside of the aerodrome boundaries, and notification to the CAA, of the nature and location of obstacles, and any subsequent addition, or removal of obstacles for action as necessary, including amendment of the AIS publications; and

18.2 monitoring and mitigating hazards related to human activities and land use, on the aerodrome and its surroundings.

Relevant inspection checklists, logbook, and record keeping; inspection intervals and times; reporting results and follow-up actions.

19. Aerodrome emergency plan including:

19.1 dealing with emergencies at the aerodrome or in its surroundings;

19.2 tests for aerodrome facilities and equipment to be used in emergencies, including their frequency; and

19.3 exercises to test emergency plans, including their frequency.

20. Rescue and firefighting, including description of facilities, equipment, personnel and procedures for meeting the firefighting requirements.

21. Removal plan of disabled aircraft, including relevant arrangements, equipment, and procedures for its implementation.

22. Procedures for ensuring the safe handling and storage of fuel and dangerous goods in the aerodrome, including:

22.1 equipment, storage areas, delivery, dispensing, handling, and safety measures;

22.2 quality and correct specification of aviation fuel; audit and inspection intervals, checklists, sampling and record keeping.

23. Low visibility operations: description of operational procedures, including coordination with air traffic services unit and apron management unit, standard taxiing routes, control of activities, and measurement and reporting of runway visual range.

24. Procedures for winter operations, including snow removal plan and procedures for its implementation as well as description of the available means and relevant arrangements.

25. Procedures for operations in adverse weather conditions.

26. Procedures for night operations.

27. Procedures for the protection of radar and other navigational aids, control of activities, and ground maintenance in the vicinity of these installations.

28. Procedures for the operation of aircraft with higher code letter at the aerodrome, including taxiing routes.

29. Procedures and measures for the prevention of fire at the aerodrome.

(b) All procedures contained in the aerodrome manual should include and clearly define the roles, responsibilities, and contact details of responsible aerodrome personnel, other persons or organizations, including the contracted ones, including the CAA and other state agencies involved, as appropriate, and take into account the need for establishing direct communication during non-working hours.

GM1 ADR.OR.E.005 Aerodrome manual

AERODROME MANUAL

(a) Form of the aerodrome manual

The aerodrome manual is a key document both for the aerodrome/airport operator and the CAA. The manual is the source document describing how the aerodrome infrastructure, facilities, and operational procedures will operate safely.

As well as the operational procedures, the CAA will expect the aerodrome manual to be an accurate reflection of the day-to-day functioning of the aerodrome's safety management system, and its safety culture. It will need to show how the aerodrome intends to measure its performance against safety targets and objectives. The reader of an aerodrome manual should be given a clear statement of how safety is developed, managed, and maintained on the aerodrome. All safety policies, operational procedures and instructions should be contained in detail when relevant or cross-referenced to other controlled, formally accepted or recognized, publications.

At aerodromes, the size and complexity of operations, and related procedures may dictate that these procedures could not easily be included in a single document. In such circumstances, it is acceptable to identify and reference within the aerodrome manual the procedures which are not included within it. If this system is to be successful, it is essential that any referenced information, documentation, and procedures are made available as necessary to all operational staff in a similar way as the aerodrome manual itself. For that purpose, a computerized database containing the referenced procedures and information could be suitable.

(b) Purpose of the aerodrome manual

An efficient management structure and a systematic approach to aerodrome operation is essential. The aerodrome manual should contain all the relevant information to describe this structure satisfactorily. It is one of the means by which all relevant operating staff can be informed as to their duties and responsibilities with regard to safety. It should describe the aerodrome infrastructure, services and facilities, all operating procedures, and any restrictions on aerodrome availability.

Accountability for safety must start at the very top of any organization. One of the key elements in establishing safe working practices is the 'top down' approach where all staff should understand the safety aims of the organization, the chain of command, and their own responsibilities and accountabilities. As safety management principles are applied, the aerodrome manual should be expanded to describe clearly how the safety of operations is to be managed. To a reader or user of the aerodrome manual, there should never be any doubt in terms of 'safety accountability' for each domain or activity described. Each section should define who is accountable, who is responsible, who has the authority, who has the expertise, and who actually carries out the tasks described in any section.

The principle objective of an aerodrome manual should be to show how management will accomplish its safety responsibilities. The aerodrome manual will set out the policy and expected standards of performance, and the procedures by which they will be achieved.

The aerodrome/airport operator should ensure that:

(1) the responsibilities of the aerodrome/airport operator are clearly described;

(2) the tasks and activities that are to be performed by the aerodrome/airport operator or its subcontractors are listed; and

(3) the means and procedures in order to complete these tasks and activities are described or appended, together with the necessary details on their frequencies and operating modes.

Where responsibilities are attributed to other stakeholders, the aerodrome manual should clearly identify them.

GM2 ADR.OR.E.005 Aerodrome manual

CONTENTS

The numbering system described in AMC3 ADR.OR.E.005 should be maintained even if there are sections that, because of the nature of the aerodrome or the types of operation, are not applicable.

GM1 ADR.OR.E.005(j) Aerodrome manual

HUMAN FACTORS PRINCIPLES

Guidance material on the application of human factors principles may be found in the ICAO Human Factors Training Manual (Doc 9683).

ANNEX III ACCEPTABLE MEANS OF COMPLIANCE AND GUIDANCE MATERIAL TO ADR-OPS - OPERATIONS REQUIREMENTS

SUBPART A — AERODROME DATA (ADR.OPS.A)

AMC1 ADR.OPS.A.005 Aerodrome data

(a) Data relevant to the aerodrome and available services should include, but may not be limited to, items in the following list:

(1) aerodrome reference point;

(2) aerodrome and runway elevations;

(3) aerodrome reference temperature;

(4) aerodrome dimensions and related information;

(5) strength of pavements;

(6) pre-flight altimeter check location;

(7) declared distances;

(8) condition of the movement area and related facilities;

(9) disabled aircraft removal;

(10) rescue and firefighting; and

(11) visual approach slope indicator systems.

(b) The aerodrome/airport operator should measure and report to the aeronautical information services obstacles and terrain data in Area 3, and in Area 2 (the part within the aerodrome boundary) in degrees, minutes, seconds and tenths of seconds. In addition, the top elevation, type, marking and lighting (if any) of obstacles should be reported to the aeronautical information services.

Note. — *PANS-AIM (Doc 10066), Appendix 8 provides requirements for obstacle data determination in Areas 2 and 3.*

[According to Order no. 44/GEN from 21.10.2020]

(c) Electronic obstacle data for all obstacles in Area 2 (the part within the aerodrome boundary) that are assessed as being a hazard to air navigation should be provided.

(d) Electronic terrain and obstacle data should be provided for:

(1) Area 2a, for those that penetrate the relevant obstacle data collection surface;

(2) penetrations of the take-off flight path area obstacle identification surfaces; and

(3) penetrations of the aerodrome obstacle limitation surfaces.

(e) Electronic terrain and obstacle data should be provided for Area 4 for terrain and obstacles that penetrate the relevant obstacle data collection surface, for all runways where precision approach Category II or III operations have been established and where detailed terrain information is required by operators to enable them to assess the effect of terrain on decision height determination by use of radio altimeters.

(f) The aerodrome/airport operator should establish arrangements with the Air Traffic Services providers for the provision of obstacles and terrain data outside of the aerodrome boundary.

GM1 ADR.OPS.A.005 Aerodrome data

AERODROME REFERENCE POINT

(a) The aerodrome reference point should be located near the initial or planned geometric centre of the aerodrome and normally should remain where first established.

(b) The aerodrome reference point should be measured and reported to the aeronautical information services in degrees, minutes, and seconds.

AERODROME AND RUNWAY ELEVATIONS

The following should be measured and reported to the aeronautical information services:

(a) The aerodrome elevation and geoid undulation at the aerodrome elevation position to the accuracy of one-half metre or foot;

(b) For non-precision approaches, the elevation and geoid undulation of each threshold, the elevation of the runway end and any significant high and low intermediate points along the runway, to the accuracy of one-half metre or foot;

(c) For precision approach runway, the elevation and geoid undulation of the threshold, the elevation of the runway end and the highest elevation of the touchdown zone, to the accuracy of one-quarter metre or foot.

AERODROME REFERENCE TEMPERATURE

(a) The aerodrome reference temperature should be determined in degrees Celsius.

(b) The aerodrome reference temperature should be the monthly mean of the daily maximum temperatures for the hottest month of the year (the hottest month being that which has the highest monthly mean temperature), averaged over a period of five (5) years.

AERODROME DIMENSIONS AND RELATED INFORMATION

The following data are measured or described, as appropriate, for each facility provided on the aerodrome:

(a) Runway

(1) true bearing to one-hundredth of a degree;

(2) designation number;

(3) length;

(4) width;

(5) displaced threshold location to the nearest metre or foot;

(6) longitudinal slope;

(7) surface type;

(8) type of runway; and

(9) for a precision approach runway category I, the existence of an obstacle free zone when provided.

(b) Strip/Runway End Safety Area/Stopway

(1) Length, width to the nearest metre or foot; and

(2) Surface type; and

(3) Arresting system – location (which runway end) and description

(c) Taxiway

(1) Designation;

(2) Width; and

(3) Surface type.

(d) Apron

(1) Surface type; and

(2) Aircraft stands.

(e) The boundaries of the air traffic control service;

(f) Clearway

(1) length to the nearest metre or foot; and

(2) ground profile.

(g) Visual aids for approach procedures, marking and lighting of runways, taxiways and aprons, other visual guidance and control aids on taxiways and aprons, including runway holding positions, intermediate holding positions and stopbars, and location and type of visual docking guidance systems;

(h) Location and radio frequency of any VOR aerodrome checkpoint;

(i) Location and designation of standard taxi-routes;

(j) Distances to the nearest metre or foot of localiser and glide path elements comprising an instrument landing system (ILS) or azimuth and elevation antenna of a microwave landing system (MLS) in relation to the associated runway extremities;

(k) The geographical coordinates of:

(1) each threshold;

(2) appropriate taxiway centre line points; and

(3) each aircraft stand;

are measured and reported to the aeronautical information services in degrees, minutes, seconds and hundredths of seconds.

STRENGTH OF PAVEMENTS

Note. - *Applicable until 27 November 2024*

[According to Order no. 44/GEN from 21.10.2020]

(a) The bearing strength of a pavement intended for aircraft of apron (ramp) mass greater than 5 700 kg should be made available using the aircraft classification — pavement classification number (ACN–PCN) method, by reporting all of the following information:

(1) the pavement classification number (PCN);

(2) pavement type for ACN-PCN determination;

(3) subgrade strength category;

(4) maximum allowable tire pressure category or maximum allowable tire pressure value; and

(5) evaluation method.

(b) For the purposes of determining the ACN, the behaviour of a pavement should be classified as equivalent to a rigid or flexible construction;

(c) Information on pavement type for ACN-PCN determination, subgrade strength category, maximum allowable tire pressure category and evaluation method, should be reported using the following codes:

(1) Pavement type for ACN-PCN determination:

(i) Rigid pavement: Code R;

(ii) Flexible pavement: Code F;

(2) Subgrade strength category:

(i) High strength: characterized by K = 150 MN/m3 and representing all K values above 120 MN/m3 for rigid pavements, and by CBR = 15 and representing all CBR values above 13 for flexible pavements — Code A;

(ii) Medium strength: characterized by K = 80 MN/m3 and representing a range in K of 60 to 120 MN/m3 for rigid pavements, and by CBR = 10 and representing a range in CBR of 8 to 13 for flexible pavements — Code B;

(iii) Low strength: characterized by K = 40 MN/m3 and representing a range in K of 25 to 60 MN/m3 for rigid pavements, and by CBR = 6 and

representing a range in CBR of 4 to 8 for flexible pavements — Code C;

(iv) Ultra low strength: characterised by K = 20 MN/m3 and representing all K values below 25 MN/m3 for rigid pavements, and by CBR = 3 and representing all CBR values below 4 for flexible pavements — Code D;

(3) Maximum allowable tire pressure category:

(i) Unlimited: no pressure limit — Code W;

(ii) High: pressure limited to 1.75 MPa — Code X;

(iii) Medium: pressure limited to 1.25 MPa — Code Y;

(iv) Low: pressure limited to 0.50 MPa — Code Z;

(4) Evaluation method:

(i) Technical evaluation: representing a specific study of the pavement characteristics and application of pavement behaviour technology — Code T;

(ii) Using aircraft experience: representing a knowledge of the specific type and mass of aircraft satisfactorily being supported under regular use — Code U;

(d) The bearing strength of a pavement intended for aircraft of apron (ramp) mass equal to or less than 5 700 kg, should be reported by reporting the following information:

(1) maximum allowable aircraft mass; and

(2) maximum allowable tire pressure.

PRE-FLIGHT ALTIMETER CHECK LOCATION

(a) One or more pre-flight altimeter check locations should be established.

(b) The elevation of a pre-flight altimeter check location should be given as the average elevation, rounded to the nearest metre or foot, of the area on which it is located. The elevation of any portion of a pre-flight altimeter check location should be within 3 m (10 ft) of the average elevation for that location.

(c) Pre-flight check location could be located on an apron. Locating a pre-flight altimeter check location on an apron enables an altimeter check to be made prior to obtaining taxi clearance and eliminates the need for stopping for that purpose after leaving the apron. Normally an entire apron could serve as a satisfactory altimeter check location.

DECLARED DISTANCES

(a) The following distances should be calculated to the nearest metre or foot for a runway and reported to the aeronautical information services and Air Traffic Services:

(1) Take-off run available (TORA);

(2) Take-off distance available (TODA);

(3) Accelerate stop distance available (ASDA); and

(4) Landing distance available (LDA).

(b) The take-off run available (TORA), take-off distance available (TODA), accelerate stop distance available (ASDA) and landing distance available (LDA) should be calculated according to the following (all declared distances are illustrated for operations from left to right):

(1) Where a runway is not provided with a stopway or a clearway and the threshold is located at the extremity of the runway, the four declared distances should normally be equal to the length of the runway

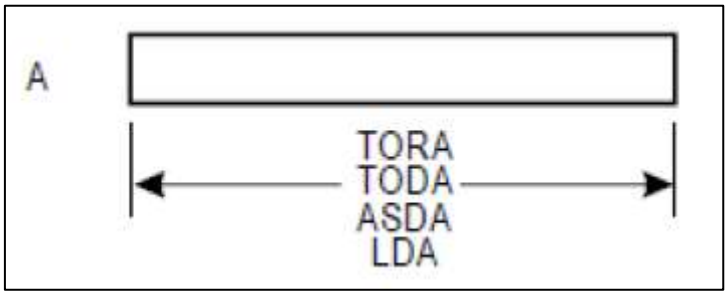


Figure 1

(2) When a runway is provided with a clearway (CWY), then the TODA will include the length of clearway.

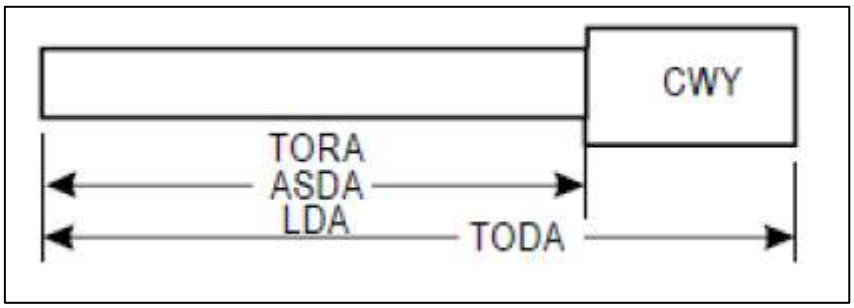


Figure 2

(3) Where a runway is provided with a stopway (SWY), then the ASDA will include the length of stopway.

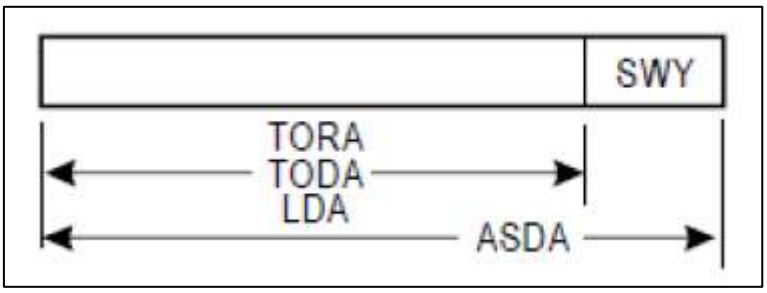


Figure 3

(4) Where a runway has a displaced threshold, then the LDA will be reduced by the distance the threshold is displaced. A displaced threshold affects only the LDA for approaches made to that threshold; all declared distances for operations in the reciprocal direction are unaffected.

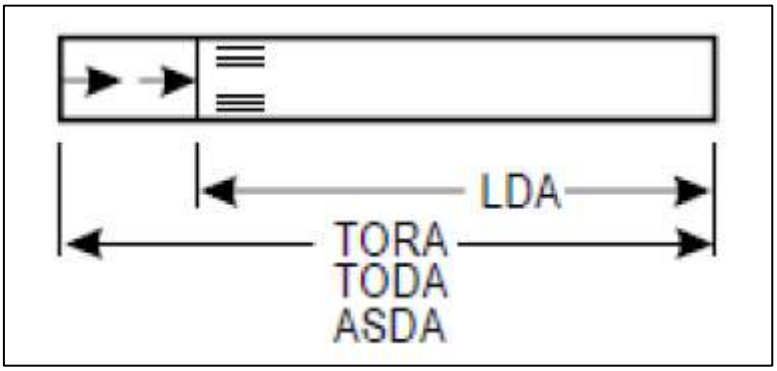


Figure 4

(5) Where a runway is provided with more than one of the clearway, stopway, or having a displaced threshold, then more than one of the declared distances will be modified. The modification will follow the same principle as in (1)–(4)

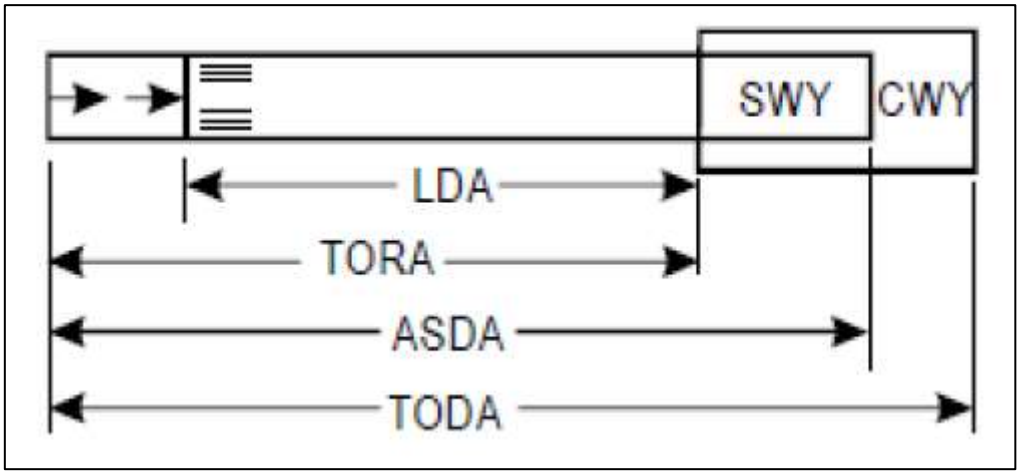


Figure 5

(c) The information on declared distances should be provided according to the following table:

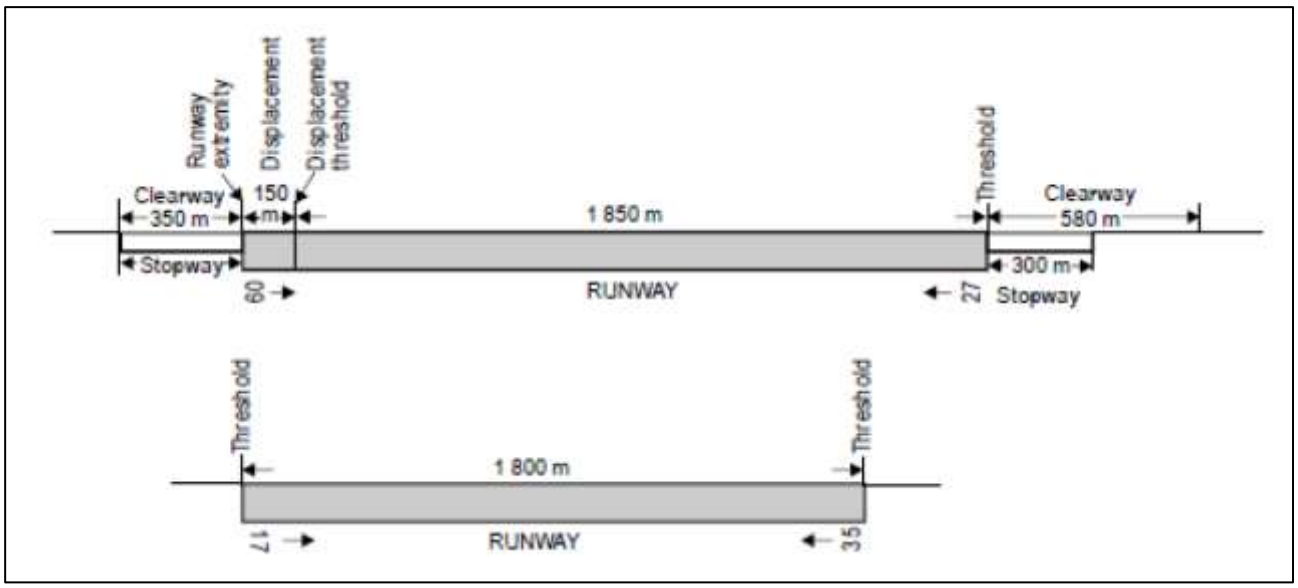


Figure 6

RUNWAY	TORA (m)	ASDA (m)	TODA (m)	LDA (m)
06	2000	2300	2580	1850
24	2000	2350	2350	2000
12	NU	NU	NU	1800
30	1800	1800	1800	1800

Table 1

If a runway direction cannot be used for take-off or landing, or both because it is operationally forbidden, then this should be declared and the words ‘not usable’ or the abbreviation ‘NU’ entered.

(d) When intersection take-offs are performed, the datum line from which the reduced runway declared distances for take-off are determined, should be defined by the intersection of the downwind edge as shown in the figure below:

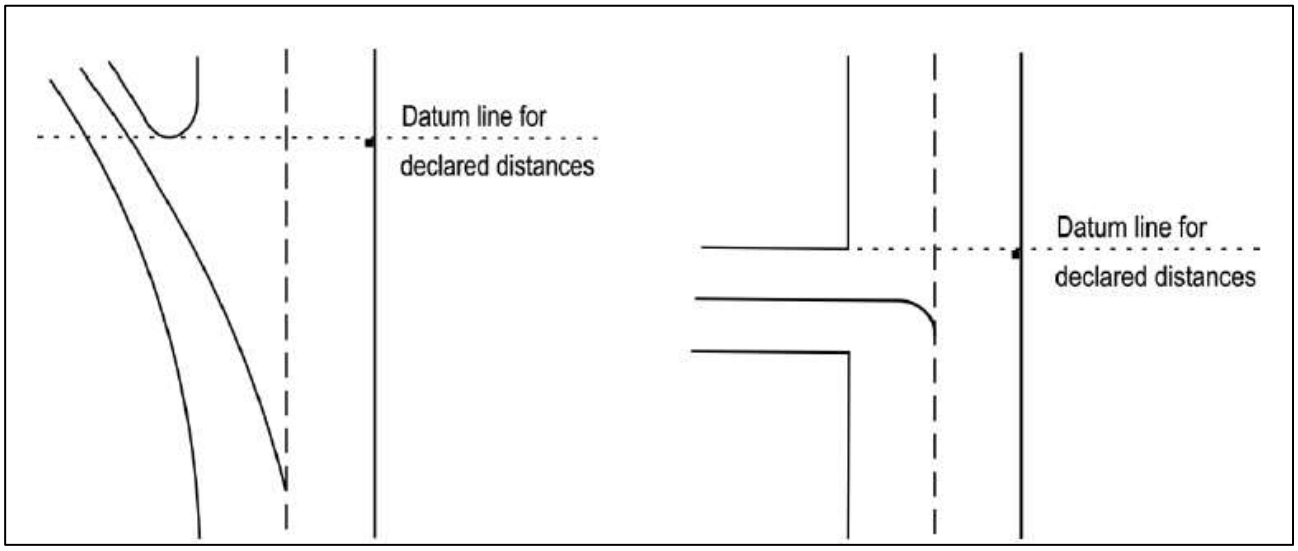


Figure 7

CONDITION OF THE MOVEMENT AREA AND RELATED FACILITIES *Applicable until 3 November 2021 [According to Order no. 44/GEN from 21.10.2020].*

The condition of the movement area and the operational status of related facilities should be monitored and reported, on matters of operational significance affecting aircraft and aerodrome operations, particularly in respect of the following:

(a) construction or maintenance work;

(b) rough or broken surfaces on a runway, a taxiway or an apron;

(c) snow, slush, ice, or frost on a runway, a taxiway or an apron;

(d) water on a runway, a taxiway or an apron;

(e) snow banks or drifts adjacent to a runway, a taxiway or an apron;

(f) anti-icing or de-icing liquid chemicals or other contaminants on a runway, taxiway or apron;

(g) other temporary hazards, including parked aircraft;

(h) failure or irregular operation of part or all of the aerodrome visual aids; and

(i) failure of the normal or secondary power supply.

Water on a runway

Whenever water is present on a runway, a description of the runway surface should be made available using the following terms:

(a) DAMP — the surface shows a change of colour due to moisture;

(b) WET — the surface is soaked but there is no standing water;

(c) STANDING WATER — for aeroplane performance purposes, a runway where more than 25 per cent of the runway surface area (whether in isolated areas or not) within the required length and width being used is covered by water more than 3 mm deep.

Information that a runway or portion thereof maybe slippery when wet, should be made available to the aerodrome users.

Snow, slush or ice or frost on a runway

(a) Whenever an operational runway is contaminated by snow, slush, ice or frost, the runway surface condition should be assessed and reported. Runway condition assessment should be repeated as conditions change.

(b) The contaminant type, distribution, and for loose contaminants, depth for each third of the runway, should be assessed. An indication of surface friction characteristics is helpful in conducting runway condition assessment however caution should be exercised when correlating the results obtained by friction measuring equipment with aircraft performance. Additionally, for contaminants such as slush, wet snow and wet ice, contaminant drag on the equipment's measuring wheel, amongst other factors, may cause readings obtained in these conditions to be unreliable.

(c) Assessment of the friction of a runway should be made in descriptive terms of 'estimated surface friction'. The estimated surface friction should be categorized as good, medium to good, medium, medium to poor, and poor, and promulgated in SNOWTAM format as well as using appropriate RTF phraseologies.

(d) The estimated surface friction, based on the measured coefficient, when the runway is covered by compacted snow or ice only, could be reported according to the following table (indicative), although these values may vary due to the friction measuring device as well as to the surface being measured and the speed employed:

Measured Coefficient (μ)	Estimated surface friction	Code
0.40 and above	Good	5
0.39 to 0.36	Medium to good	4
0.35 to 0.30	Medium	3
0.29 to 0.26	Medium to poor	2
0.25 and below	Poor	1

Table 2

(e) Assessed surface condition information, including estimated surface friction, should be reported for each third of a runway. The thirds are called A, B and C;

(1) For the purpose of reporting information to aeronautical service units, Section A should always be the section associated with the lower runway designation number;

(2) When giving landing information to a pilot before landing, the sections should be referred to as first, second or third part of the runway. The first part should always mean the first third of the runway as seen in the direction of landing;

(3) Assessments should be made along two lines parallel to the runway, i.e. along a line on each side of the centreline approximately 3 m, or that distance from the centreline at which most operations take place. The objective of the assessment is to determine the type, depth and coverage of the contaminants and its effect on estimated surface friction given the prevailing weather conditions for sections A, B and C;

(4) In cases where a continuous friction measuring device is used, the mean values are obtained from the friction values recorded for each section;

(f) Whenever dry snow, wet snow, slush ice or frost is present and reported, the description of the runway surface condition should use the following terms:

(1) dry snow;

(2) wet snow;
(3) compacted snow;
(4) wet compacted snow;
(5) slush;
(6) ice;
(7) wet ice;
(8) frost;
(9) dry snow on ice;
(10) wet snow on ice;
(11) chemically treated;
(12) sanded; and

should include, where applicable, the assessment of contaminant depth.

CONDITION OF THE MOVEMENT AREA AND RELATED FACILITIES *Applicable from 4 November 2021 [According to Order no. 44/GEN from 21.10.2020]*.

(a) Information on the condition of the movement area and the operational status of related facilities shall be provided to the appropriate aeronautical information services units, and similar information of operational significance to the air traffic services units, to enable those units to provide the necessary information to arriving and departing aircraft. The information shall be kept up to date and changes in conditions reported without delay.

Note.- *The nature, format and conditions of the information to be provided are specified in the PANS-AIM (ICAO Doc 10066) and the PANS-ATM (ICAO Doc 4444).*

(b) The condition of the movement area and the operational status of related facilities shall be monitored, and reports on matters of operational significance affecting aircraft and aerodrome operations shall be provided in order to take appropriate action, particularly in respect of the following:

(1) construction or maintenance work;
(2) rough or broken surfaces on a runway, a taxiway or an apron;
(3) water, snow, slush, ice, or frost on a runway, a taxiway or an apron;
(4) (Reserved)
(5) anti-icing or de-icing liquid chemicals or other contaminants on a runway, taxiway or apron;
(6) snow banks or drifts adjacent to a runway, a taxiway or an apron;
(7) other temporary hazards, including parked aircraft;
(8) failure or irregular operation of part or all of the aerodrome visual aids; and
(9) failure of the normal or secondary power supply.

Note 1.- *Other contaminants may include mud, dust, sand, volcanic ash, oil and rubber. Procedures for monitoring and reporting the conditions of the movement area are included in the PANS-Aerodromes (ICAO Doc 9981).*

Note 2.- *The Aeroplane Performance Manual (ICAO Doc 10064) provides guidance on aircraft performance calculation requirements regarding the description of runway surface conditions in (b) (3), (b) (5) and (b) (6).*

Note 3.- *Origin and evolution of data, assessment process and the procedures are prescribed in the PANS-Aerodromes (ICAO Doc 9981). These procedures are intended to fulfil the requirements to achieve the desired level of safety for aeroplane operations prescribed by ICAO Annex 6 and ICAO Annex 8 and to provide the information fulfilling the syntax requirements for dissemination specified in ICAO Annex 15 and the PANS-ATM (ICAO Doc 4444).*

(c) To facilitate compliance with (a) and (b), the following inspections shall be carried out each day:

(1) for the movement area, at least once where the aerodrome reference code number is 1 or 2 and at least twice where the aerodrome reference code number is 3 or 4; and

(2) for the runway(s), inspections in addition to a) whenever the runway surface conditions may have changed significantly due to meteorological conditions.

Note 1.- *Procedures on carrying out daily inspections of the movement area are given in the PANS-Aerodromes (ICAO Doc 9981). Further guidance is available in the Airport Services Manual (ICAO Doc 9137), Part 8, in the Manual of Surface Movement Guidance and Control Systems (SMGCS) (ICAO Doc 9476) and in the Advanced Surface Movement Guidance and Control Systems (A-SMGCS) Manual (ICAO Doc 9830).*

Note 2.- *The PANS-Aerodromes (ICAO Doc 9981) contains clarifications on the scope of a significant change in the runway surface conditions.*

(d) Personnel assessing and reporting runway surface conditions required in (b) and (e) shall be trained and competent to perform their duties.

Note 1.- *Guidance on training of personnel is given in the Supplement 6 to the „Technical requirements on design and operation of aerodromes".*

Note 2.- *Information on training for personnel assessing and reporting runway surface conditions is available in the PANS-Aerodromes (ICAO Doc 9981).*

Runway surface condition(s) for use in the runway condition report

Introductory note.- *The philosophy of the runway condition report is that the aerodrome operator assesses the runway surface conditions whenever water, snow, slush, ice or frost are present on an operational runway. From this assessment, a runway condition code (RWYCC) and a description of the runway surface are reported which can be used by the flight crew for aeroplane performance calculations. This report, based on the type, depth and coverage of contaminants, is the best assessment of the runway surface condition by the aerodrome operator; however, all other pertinent information may be taken into consideration. See Attachment A, Section 6, for further details. The PANS-Aerodromes (ICAO Doc 9981) contains procedures on the use of the runway condition report and assignment of the RWYCC in accordance with the runway condition assessment matrix (RCAM).*

(e) The runway surface condition shall be assessed and reported through a runway condition code (RWYCC) and a description using the following terms:

COMPACTED SNOW
DRY
DRY SNOW
DRY SNOW ON TOP OF COMPACTED SNOW
DRY SNOW ON TOP OF ICE
FROST
ICE
SLUSH
STANDING WATER
WATER ON TOP OF COMPACTED SNOW
WET
WET ICE
WET SNOW
WET SNOW ON TOP OF COMPACTED SNOW

WET SNOW ON TOP OF ICE
CHEMICALLY TREATED
LOOSE SAND

Note 1.- *The runway surface conditions are those conditions for which, by means of the methods described in the PANS-Aerodromes (ICAO Doc 9981), the flight crew can derive appropriate aeroplane performance.*

Note 2.- *The conditions, either singly or in combination with other observations, are criteria for which the effect on aeroplane performance is sufficiently deterministic to allow assignment of a specific runway condition code.*

Note 3.- *The terms CHEMICALLY TREATED and LOOSE SAND do not appear in the aeroplane performance section but are used in the situational awareness section of the runway condition report.*

(f) Whenever an operational runway is contaminated, an assessment of the contaminant depth and coverage over each third of the runway shall be made and reported.

Note.- *Procedures on depth and coverage reporting are found in the PANS-Aerodromes (ICAO Doc 9981).*

(g) When overall runway surface assessment is performed on surfaces covered with snow or ice, devices must be used for continuous measurement of adhesion, for example: a skiddometer, surface grip meter, mu meter or runway grip meter. Under a certain surface condition such as compacted snow, ice and a very thin layer of dry snow decelerometer equipment may be used, for example: a taplimeter or a breakmeter-dinometer. Also, other adhesion measuring devices can be used, ensuring that those measuring devices are correlated with at least on of devices mentioned above. In condition of dry snow or slush, should not be used a decelerometer equipment as it may give incorrect traction.

(h) Friction measurements made on runway surface conditions with contaminants other than compacted snow and ice should not be reported.

Note.- *Friction measurements on loose contaminants such as snow and slush, in particular, are unreliable due to drag effects on the measurement wheel.*

(i) Information that a runway or portion thereof is slippery wet shall be made available.

Note 1.- *The surface friction characteristics of a runway or a portion thereof can be degraded due to rubber deposits, surface polishing, poor drainage or other factors. The determination that a runway or portion thereof is slippery wet stems from various methods used solely or in combination. These methods may be functional friction measurements, using a continuous friction measuring device, that fall below established minimum standard requirments, observations by aerodrome maintenance personnel, repeated reports by pilots and aircraft operators based on flight crew experience, or through analysis of aeroplane stopping performance that indicates a substandard surface. Supplementary tools to undertake this assessment are described in the PANS-Aerodromes (ICAO Doc 9981).*

Note 2.- *See (a), ADR.OPS.A.015 of the „Regulation regarding administrative procedures related to aerodromes" and AMC1 ADR.AR.C.035(c) concerning the provision of information to, and coordination between, appropriate authorities.*

(j) Notification shall be given to relevant aerodrome users when the friction level of a paved runway or portion thereof is less than the minimum friction level specified in Table 2-1 of the „Technical requirements on design and operation of aerodromes".

Note 1.- *Guidance on determining and expressing the minimum friction level is provided in Assessment, Measurement and Reporting of Runway Surface Conditions (ICAO Cir 355). [According to Order 54/GEN of 29.11.2021]*

Note 2.- *Procedures on conducting a runway surface friction characteristics evaluation programme are provided in the PANS-Aerodromes (ICAO Doc 9981).*

Note 3.- *Information to be promulgated in a NOTAM includes specifying which portion of the runway is below the minimum friction level and its location on the runway.*

DISABLED AIRCRAFT REMOVAL

(a) The contact details (telephone/telex number(s), email address, etc.) of the office of the aerodrome coordinator of operations for the removal of an aircraft disabled on or adjacent to the movement area should be made available on request to aircraft operators.

(b) Information concerning the capability to remove an aircraft disabled on or adjacent to the movement area should be made available.

(c) The capability to remove a disabled aircraft may be expressed in terms of the largest type of aircraft which the aerodrome is equipped to remove.

RESCUE AND FIREFIGHTING

(a) Information concerning the level of protection provided at an aerodrome for aircraft rescue and firefighting purposes during the hours of operation should be made available.

(b) The level of protection normally available at the aerodrome should be expressed in terms of the category of the rescue and firefighting services and in accordance with the types and amounts of extinguishing agents normally available at the aerodrome.

(c) Changes in the level of protection normally available at the aerodrome for rescue and firefighting should be notified to the appropriate air traffic services units and aeronautical information services units to enable those units to provide the necessary information to arriving and departing aircraft. When such a change has been corrected, the above units should be advised accordingly.

(d) Changes in the level of protection from that normally available at the aerodrome could result from a change in the availability of extinguishing agents, equipment to deliver the agents or personnel to operate the equipment, etc.

(e) A change in the level of protection is expressed in terms of the new category of the rescue and firefighting services available at the aerodrome.

VISUAL APPROACH SLOPE INDICATOR SYSTEMS

The following information concerning a visual approach indicator system is made available:

(a) associated runway designation number;

(b) type of system; for a PAPI or APAPI installation, the side of the runway on which the lights are installed, i.e. left or right, is given;

(c) where the axis of the system is not parallel to the runway centre line, the angle of displacement and the direction of displacement, i.e. left or right, is indicated;

(d) nominal approach slope angle(s); and

(e) minimum eye height(s) over the threshold of the on-slope signal(s).

GM2 ADR.OPS.A.005(a) Aerodrome data

SURVEYING REQUIREMENTS FOR RUNWAY THRESHOLDS, TAXIWAYS AND AIRCRAFT STANDS

(a) Thresholds

(1) For surveying purposes, threshold positions must be taken as being at the geometric centre of the runway and at the beginning of the paved surface, i.e. the beginning of that portion of the runway usable for landing. Where thresholds are marked by appropriate threshold markings (e.g. displaced thresholds), these must be taken as the threshold points. Where threshold lighting is surveyed, the locations must be described on the diagram accompanying the report. Where there

is no threshold lighting, an appropriate point for survey in accordance with the following figures must be selected.

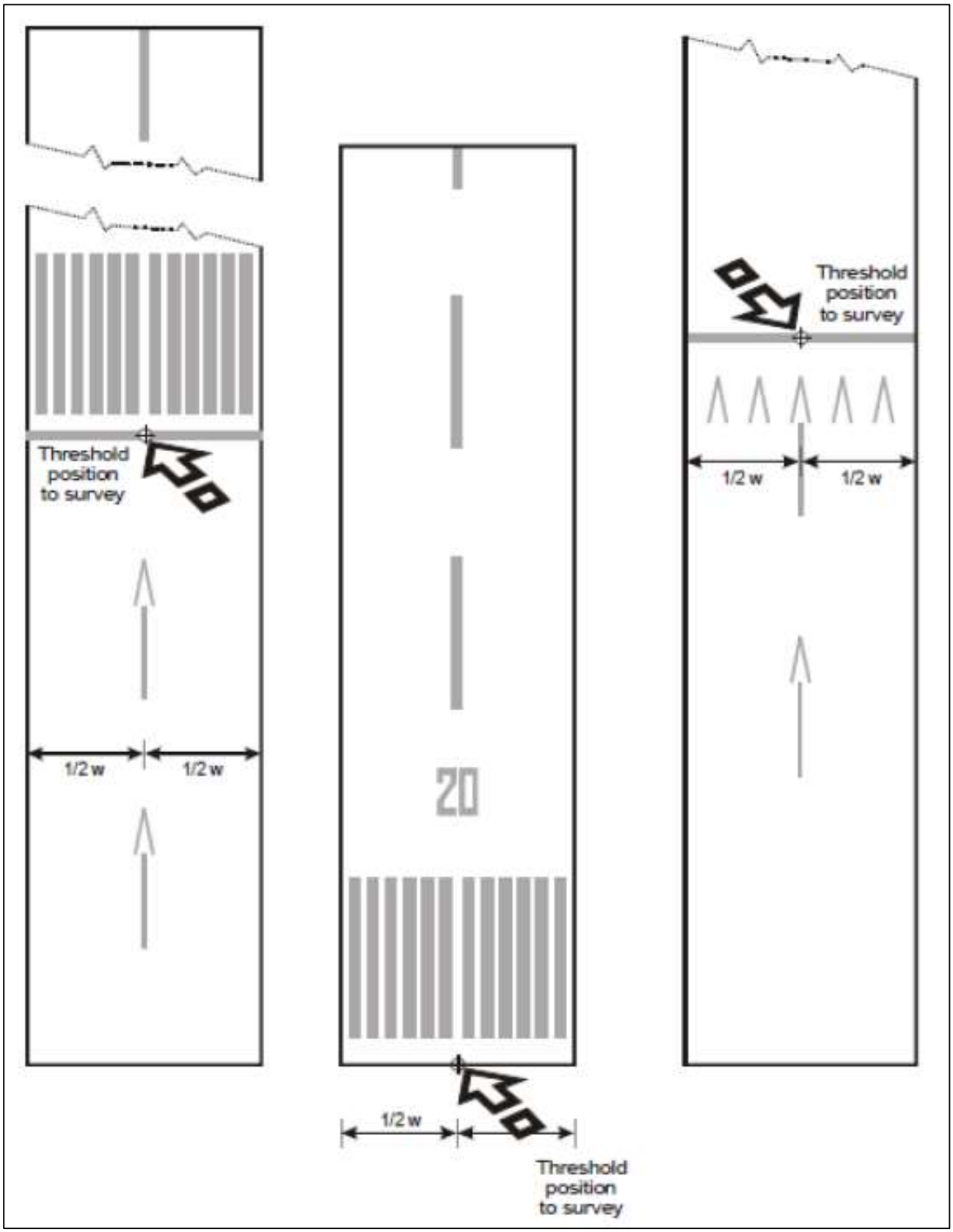


Figure 1

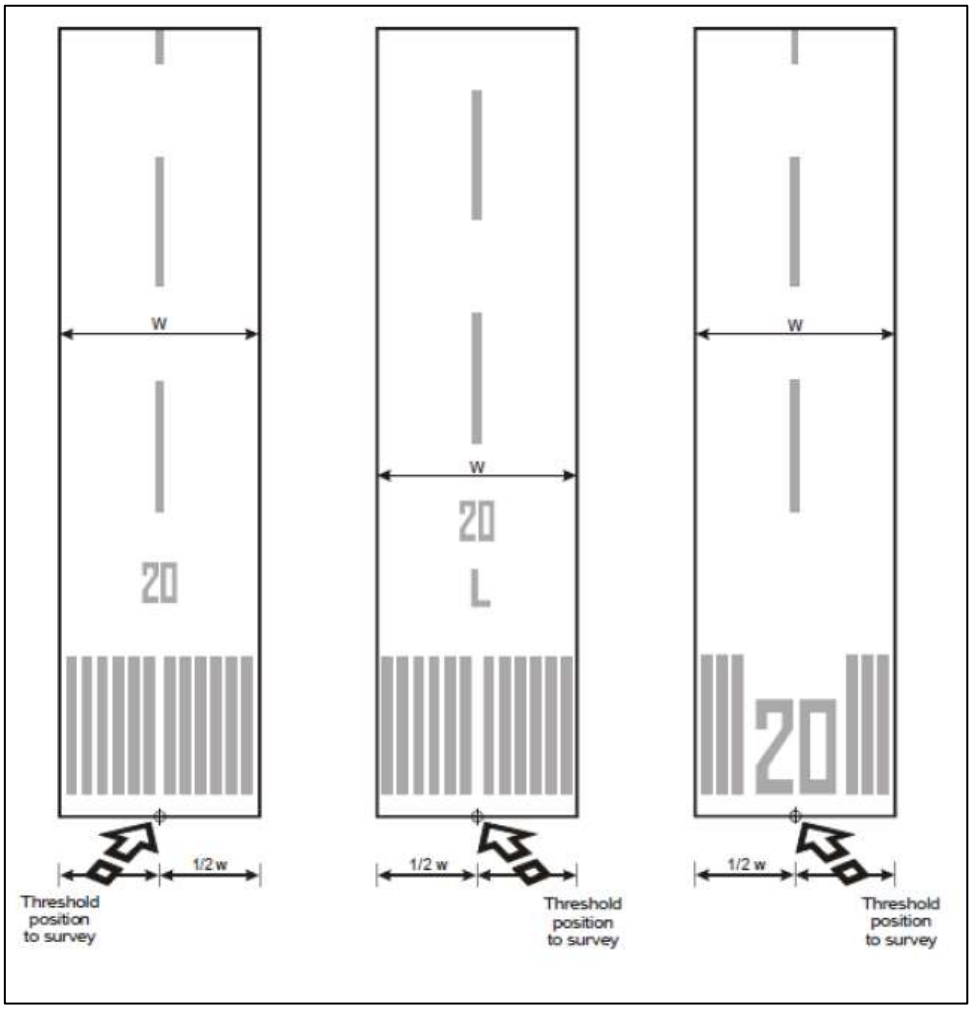


Figure 2

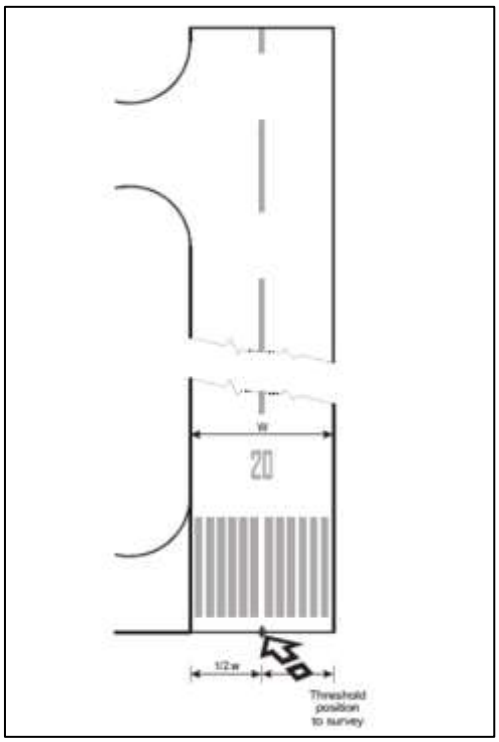


Figure 3

(2) If the runway has only one threshold certified for landing, the runway end position must be surveyed. For surveying purposes, the runway end position (flight path alignment point) must be taken as being at the geometric centre of the runway and

at the end of the paved surface, i.e. the end of that portion of the runway usable for landing.

(b) Taxiways and stand/checkpoints — General

(1) Except as provided in (c) (1) below, for surveying purposes the centre (mid-width) of the taxiway centre line marking, apron taxilane marking or the aircraft stand guide line marking must be taken as the reference data.

(2) The points of commencement and ends of straight sections of taxiways, apron taxilanes and aircraft stand point guidance lines markings must be surveyed. Sufficient additional points must be surveyed to maintain the required accuracy along the lines.

(3) For curved sections of taxiways, apron taxilanes and aircraft stand guide line markings, the commencement and end of the curved section centre line must be surveyed together with the position of the centre point of the arc and its radius. In the case of a compound curve, the centre and radius of each arc and the commencement and end of each of the arcs must be surveyed. Where this is impracticable in the field, a series of sequential points must be surveyed along the curved section of the centre line with a maximum arc to chord distance not exceeding 0.25 m for taxiways and 0.10 m for apron taxilanes and aircraft stand guide line markings. Sufficient points must be surveyed to maintain the required accuracy along the lines. The surveyor must, in processing the data, conduct a graphical inspection of the survey points to ensure collinearity.

(c) Taxiways

(1) To permit uninterrupted transition from the actual runway centre line to the taxiway centre line and to provide the required continuity of guidance for the aircraft navigation data base, differentiation must be made between the surface markings and the actual path the aircraft must follow. Therefore, for the guidance of aircraft entering or exiting the runway for take-off or landing, the following must be surveyed:

(i) the point at which the radius of turn for each taxiway, is tangential to the runway centre line, and the point at which that radius of turn joins the taxiway centre line marking at a tangent;

(ii) the point that prescribes the centre of the arc; and

(iii) the radius of the arc.

Where this is impracticable in the field, a series of sequential points must be surveyed along the curved section of the centre line of taxiways.

(2) Where taxiway centre line marking is provided on a runway that is part of a standard taxi route, or a taxiway centre line is not coincident with runway centre line, the following points must be surveyed:

(i) the point on the taxiway marking at which the taxiway enters the runway;

(ii) the points at which the taxiway deviates from a straight line;

(iii) the intersection of the taxiway centre line marking and boundary of each ‘block’ that has been published as part of the aerodrome movement and guidance control system; and

(iv) the point on the taxiway marking at which the taxiway exits the runway.

(3) In defining taxiways, the following points must be surveyed at the centre of the centre line marking of each taxiway, as appropriate:

(i) intermediate holding positions and runway holding positions (including those associated with the intersection of a runway with another runway when the former runway is part of a standard taxi route) and for points established for the protection of sensitive areas for radio navigation aids;

(ii) taxiway intersection markings;

(iii) intersection of other taxiways, including taxiways described in point (c) (2) above;

(iv) intersections of 'blocks' defined for surface movement, guidance and control systems;

(v) commencement and end of selectable taxiway lighting systems provided as part of the surface movement, guidance and control systems, where different from subparagraph (iv) above; and

(d) Aircraft stand points

(1) In defining the aircraft stands, the following points must be surveyed at the centre of the guide line marking of the aircraft stands, as appropriate:

(i) taxilane centre lines;

(ii) lead-in line(s);

(iii) turning line;

(iv) straight section of the turning line;

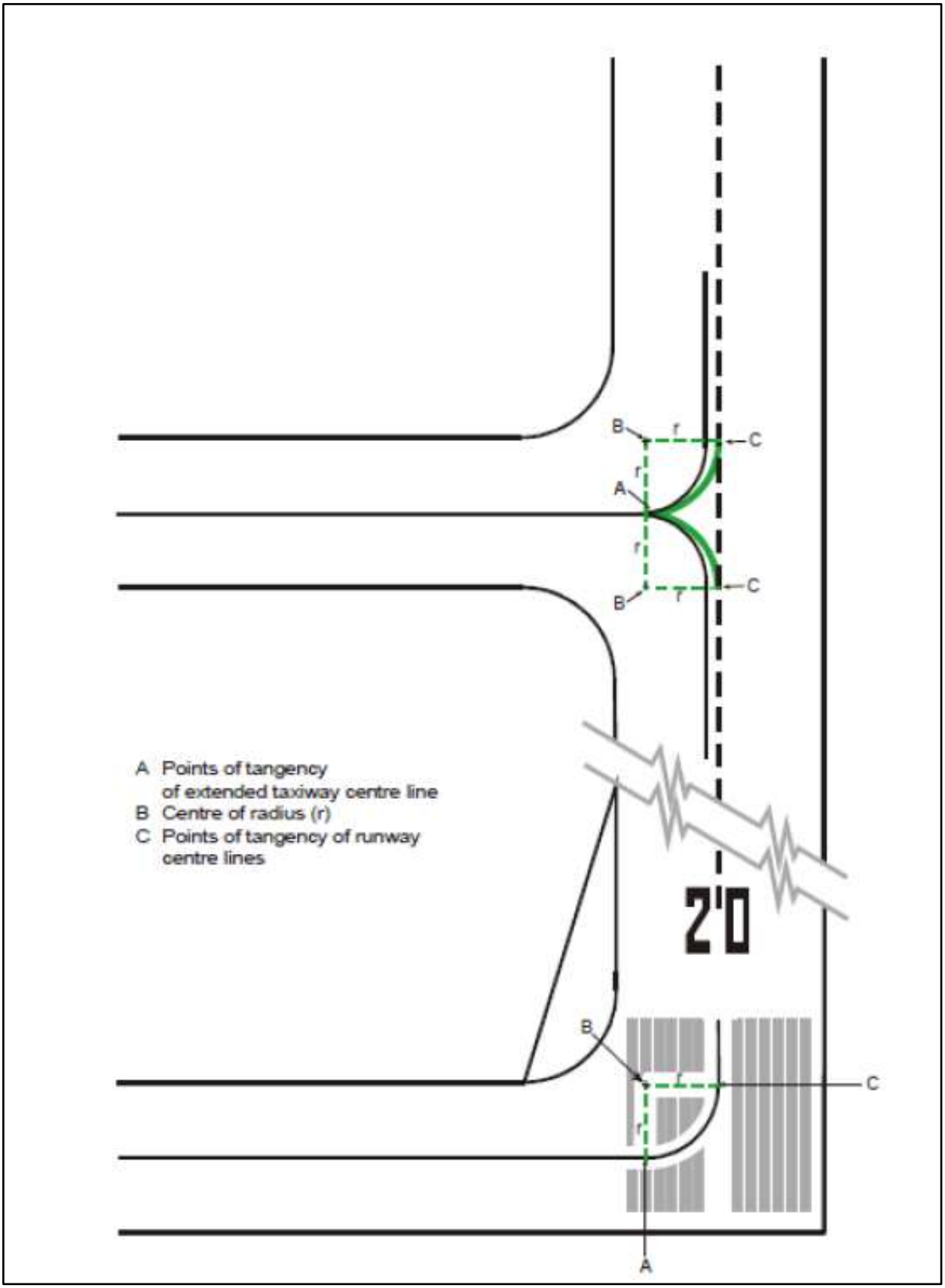
(v) nose wheel stopping position;

(vi) true heading of the alignment bar; and

(vii) lead-out line(s).

(2) Where aircraft stands are utilized by more than one aircraft type and different guide line markings exist, a diagram must be prepared by the surveyor showing the arrangement of the markings in use, together with an indication of the points surveyed. Where all the stands at an aerodrome/heliport are marked uniformly, only a single diagram needs to be prepared.

The points that should be surveyed for a taxiway or an aircraft stand, are shown in the following diagrams:



Runway and taxiway intersections to be surveyed
Figure 4

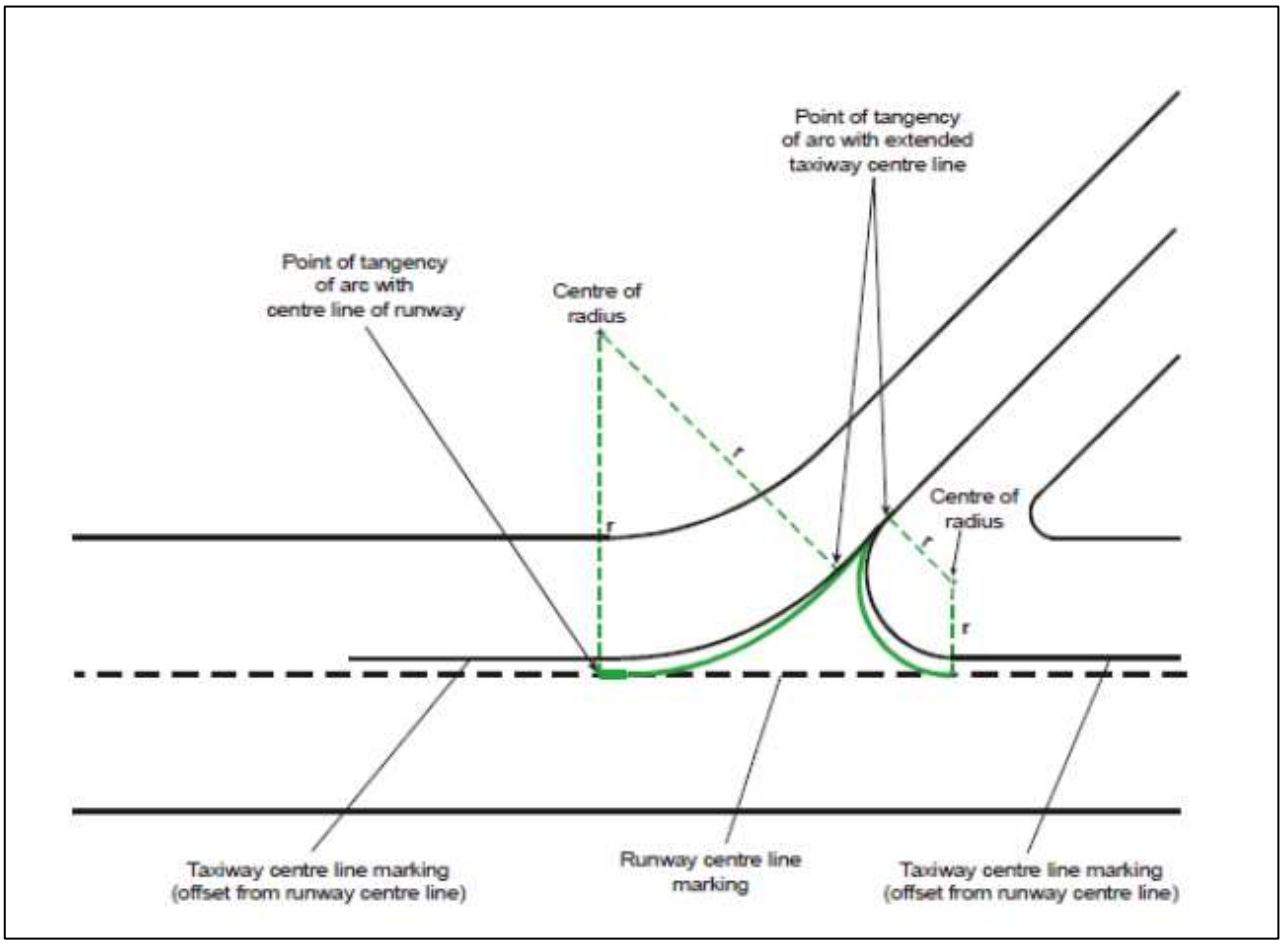


Figure 5 - Runway and taxiway intersections to be surveyed

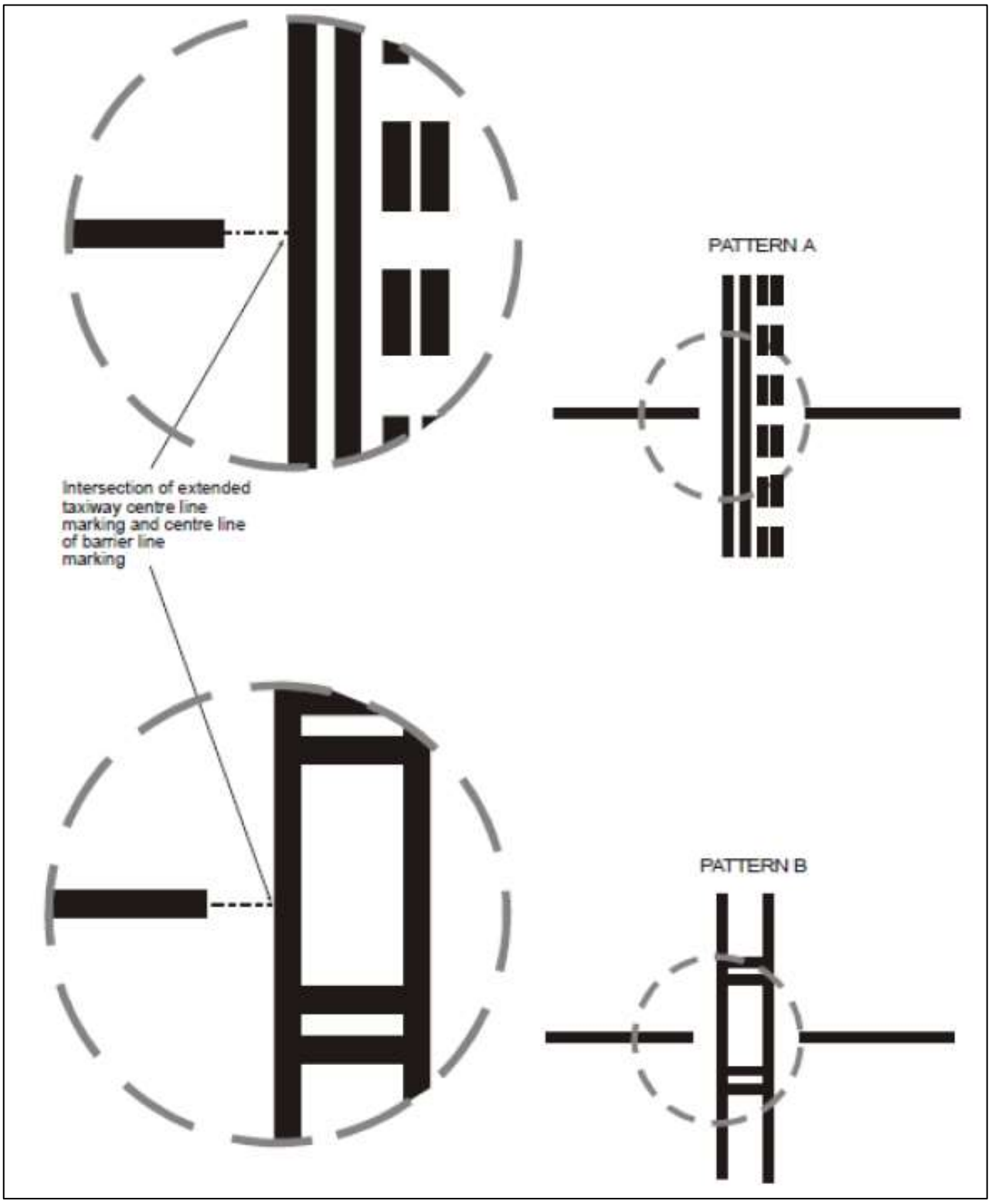


Figure 6 - Runway holding positions to be surveyed

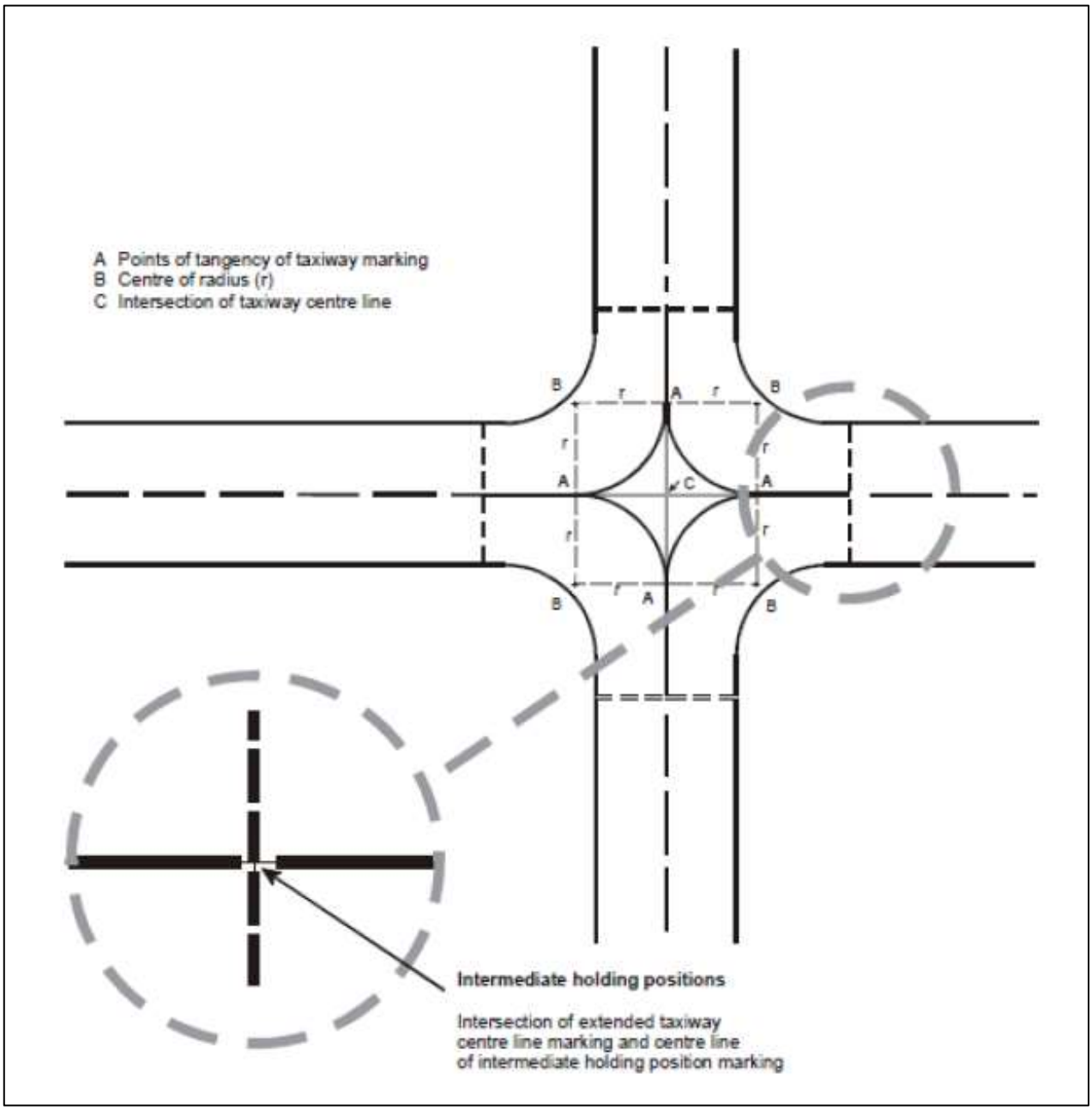


Figure 7 - Taxiway intersections to be surveyed

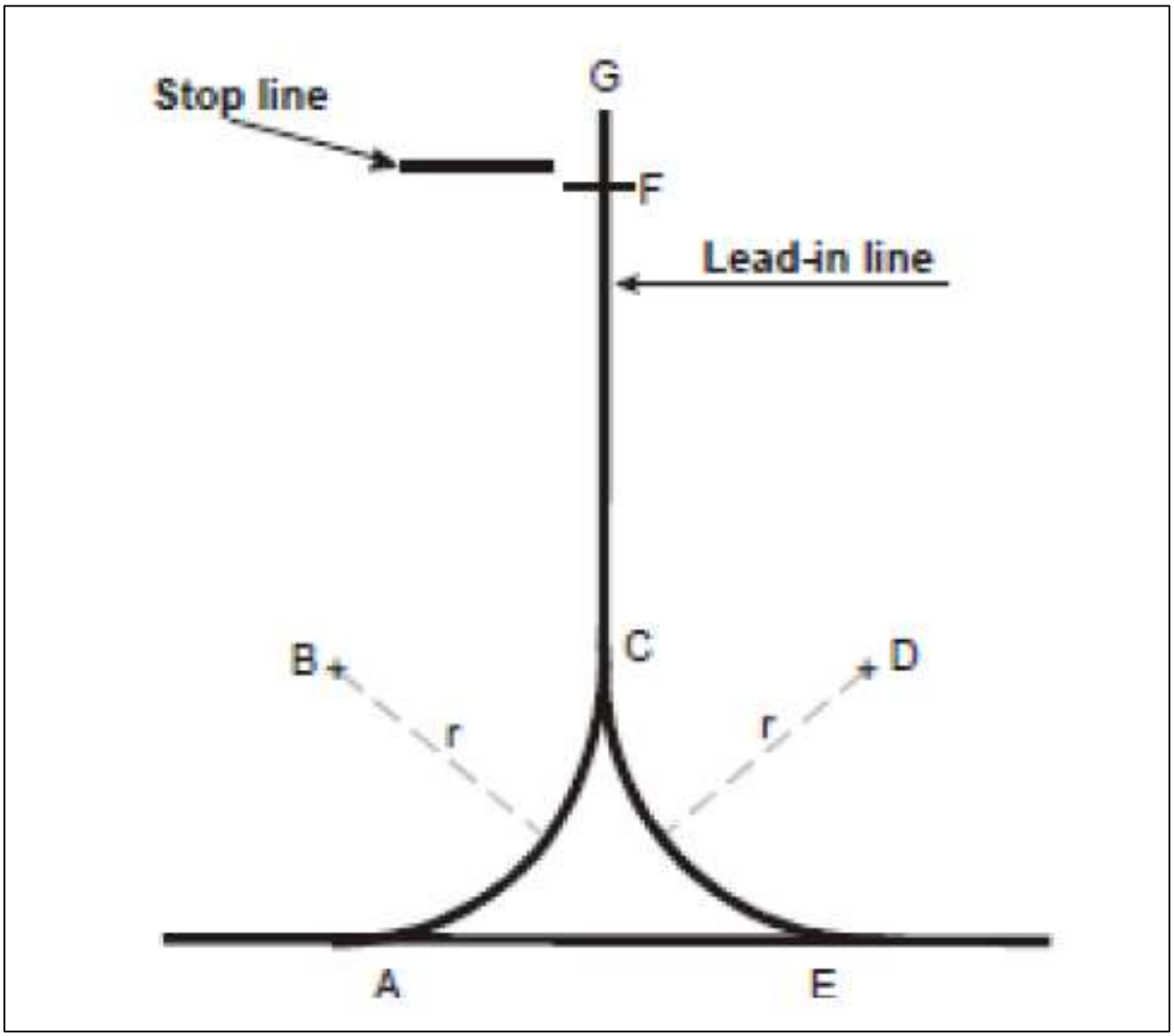


Figure 8 - Simple nose wheel lead-in line

Position	Description of point to be surveyed
A	Point of tangency of centre of lead-in marking with centre of taxilane marking
B	Centre of arc of lead-in line and radius
C	Point of tangency with centre of lead-in line marking
D	Centre of arc of lead-in line and radius
E	Point of tangency of centre of lead-in marking with centre of taxilane marking
F	Nose wheel position of parked aircraft
G	End of lead-in line marking

Table 1

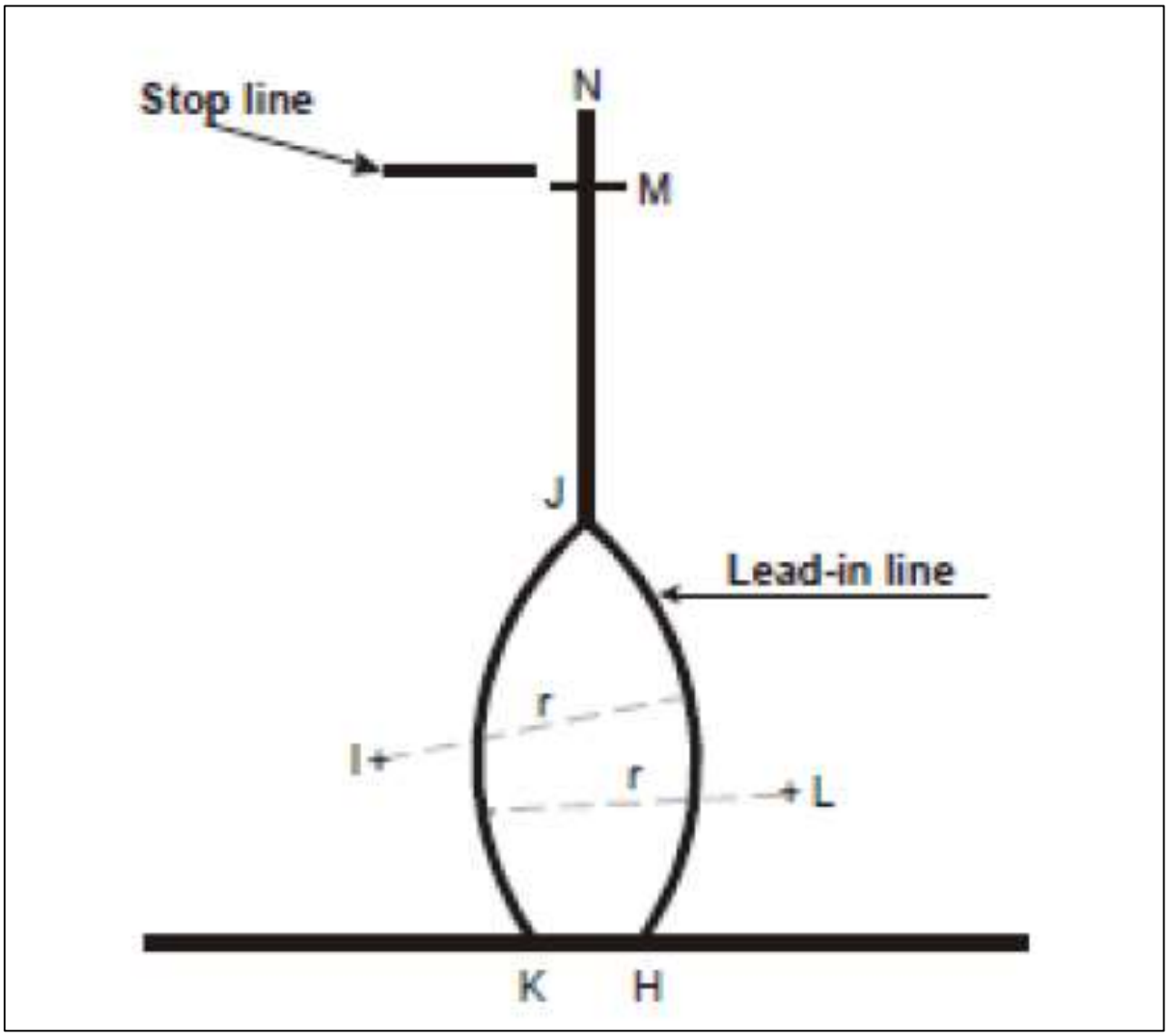


Figure 9 - Offset nose wheel lead-in line

Position	Description of point to be surveyed
H	Intersection of centre of lead-in line marking and centre of taxilane marking
I	Centre of arc of lead-in line and radius
J	Centre of commencement of straight section of lead-in line
K	Intersection of centre of lead-in line marking and centre of taxilane marking
L	Centre of arc of lead-in line and radius
M	Nosewheel position of parked aircraft
N	End of lead-in line marking

Table 2

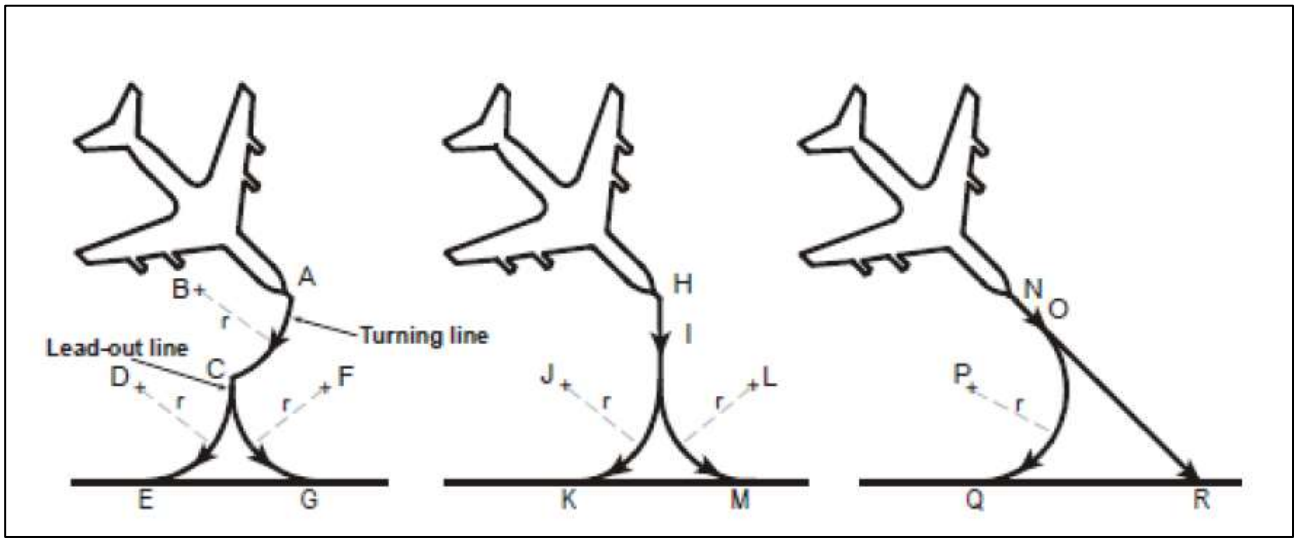


Figure 10 - Simple nose wheel lead-out lines

Position	Description of point to be surveyed
A	Centre of commencement of turning line marking
B	Centre of arc of turning line and radius
C	Centre of intersection of turning line marking and lead-out line marking
D	Centre of arc of lead-out line and radius
E	Point of tangency of centre of lead-out line marking and taxilane marking
F	Centre of arc of lead-out line and radius
G	Point of tangency of centre of lead-out line marking and taxilane marking
H	Commencement of lead-out line
I	Centre of commencement of curved section of lead-out line
J	Centre of arc of lead-out line and radius
K	Point of tangency of centre of lead-out line marking and taxilane marking
L	Centre of arc of lead-out line and radius
M	Point of tangency of centre of lead-out line marking and taxilane marking
N	Point of tangency of centre of lead-out line marking and taxilane marking
O	Centre of commencement of curved section of lead-out line
P	Centre of arc of lead-out line and radius
Q	Point of tangency of centre of lead-out line marking and taxilane marking
R	Intersection of centre of lead-out line marking and taxilane marking

Table 3

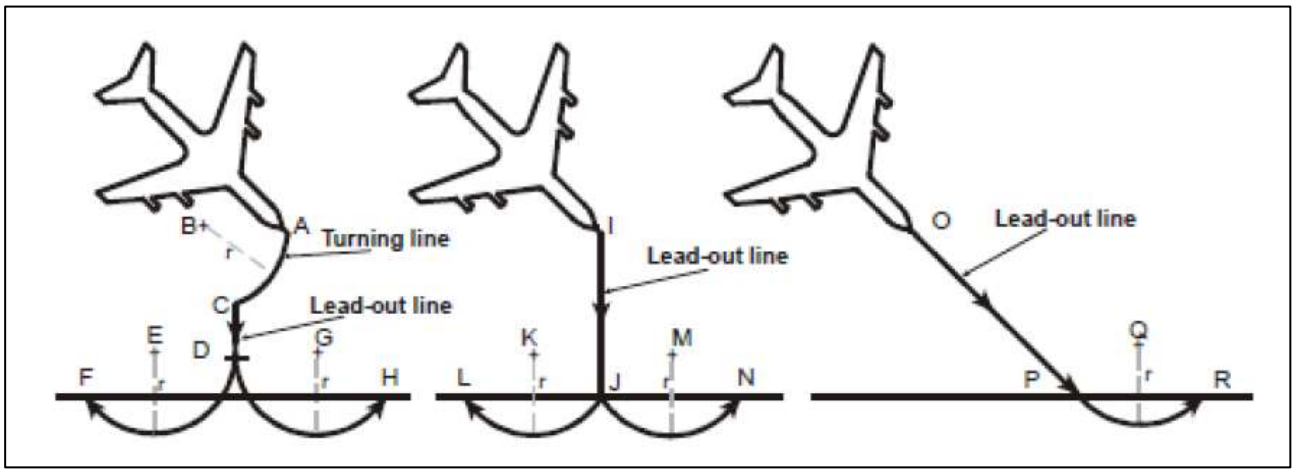


Figure 11 - Offset nose wheel lead-out lines

Position	Description of point to be surveyed
A	Centre of commencement of turning line marking
B	Centre of arc of turning line and radius
C	Centre of intersection of turning line marking and lead-out line marking
D	Centre of end of straight section of lead-out line marking
E	Centre of arc of lead-out line and radius
F	Intersection of centre of lead-out line marking and taxilane marking
G	Centre of arc of lead-out line and radius
H	Intersection of centre of lead-out line marking and taxilane marking
I	Commencement of lead-out line
J	Centre of commencement of curved section of lead-out line
K	Centre of arc of lead-out line and radius
L	Intersection of centre of lead-out line marking and taxilane marking
M	Centre of arc of lead-out line and radius
N	Intersection of centre of lead-out line marking and taxilane marking
O	Commencement of lead-out line
P	Centre of commencement of curved section of lead-out line
Q	Centre of arc of lead-out line and radius
R	Intersection of centre of lead-out line marking and taxilane marking

Table 4

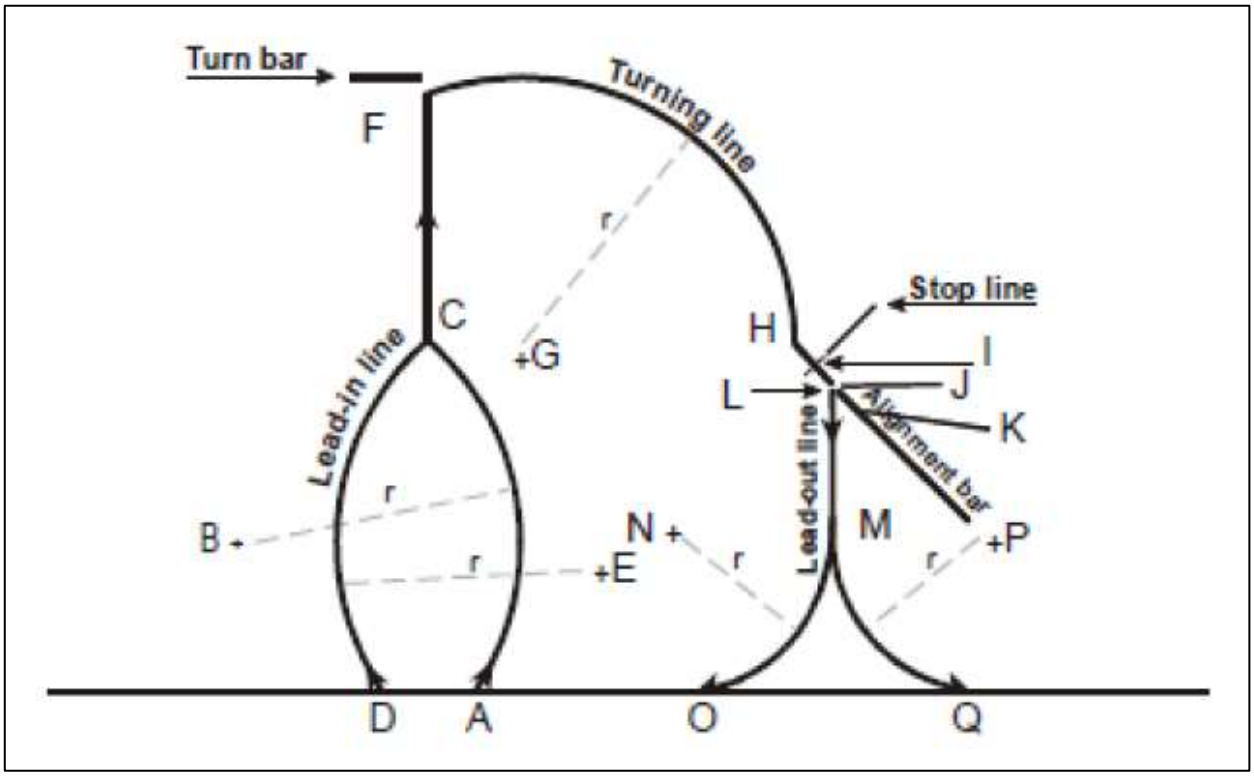


Figure 12 Turning lines

Position	Description of point to be surveyed
A	Intersection of centre of lead-in line marking and centre of taxilane marking
B	Centre of arc of lead-in line and radius
C	Centre of commencement of straight section of lead-in line
D	Intersection of centre of lead-in line marking and centre of taxilane marking
E	Centre of arc of lead-in line and radius
F	End of straight section of lead-in line marking/commencement of turning line marking
G	Centre of arc of turning line and radius
H	Centre of commencement of straight section of turning line marking
I	Nose wheel position of parked aircraft
J	Centre of end of straight section or turning line marking
K	True bearing of alignment bar
L	Commencement of lead-out line
M	Centre of commencement of curved section of lead-out line
N	Centre of arc of lead-out line and radius
O	Point of tangency of centre of lead-out line marking and taxilane marking
P	Centre of arc of lead-out line and radius
Q	Point of tangency of centre of lead-out line marking and taxilane marking

Table 5

GM3 ADR.OPS.A.005(a) Aerodrome data

FRICTION MEASURING DEVICES

A continuous friction measuring device (e.g. Skiddometer, Surface Friction Tester, Mu-meter, Runway Friction Tester or GripTester), can be used for measuring the friction values for compacted snow- and ice-covered runways. A decelerometer (e.g. Tapley Meter or Brakemeter — Dynometer) may be used on certain surface conditions, e.g. compacted snow, ice and very thin layers of dry snow. Other friction measuring devices can be used, provided they have been correlated with, at least, one of the types mentioned above. A decelerometer should not be used in loose snow or slush, as it can give misleading friction values. Other friction measuring devices can also give misleading friction values under certain combinations of contaminants and air/pavement temperature.

GM4 ADR.OPS.A.005(a) Aerodrome data

COVERAGE AREAS FOR TERRAIN AND OBSTACLE DATA PROVISION

(a) The coverage areas for sets of electronic terrain and obstacle data should be specified as follows:

(1) Area 1: the entire territory of the Republic of Moldova;

(2) Area 2: within the aerodrome surroundings, sub-divided as follows:

(i) Area 2a: a rectangular area around a runway that comprises the runway strip plus any clearway that exists;

(ii) Area 2b: an area extending from the ends of Area 2a in the direction of departure, with a length of 10 km and a splay of 15 per cent to each side;

(iii) Area 2c: an area extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a; and

(iv) Area 2d: an area outside the Areas 2a, 2b and 2c up to a distance of 45 km from the aerodrome reference point, or to an existing TMA boundary, whichever is nearest.

(3) Area 3: the area bordering an aerodrome movement area that extends horizontally from the edge of a runway to 90 m from the runway centre line, and 50 m from the edge of all other parts of the aerodrome movement area

(4) The area extending 900 m prior to the runway threshold, and 60 m each side of the extended runway centre line in the direction of the approach on a precision approach runway, Category II or III;

(b) A graphical representation of the terrain data collection surfaces for Areas 1 and 2 is shown in the following figure:

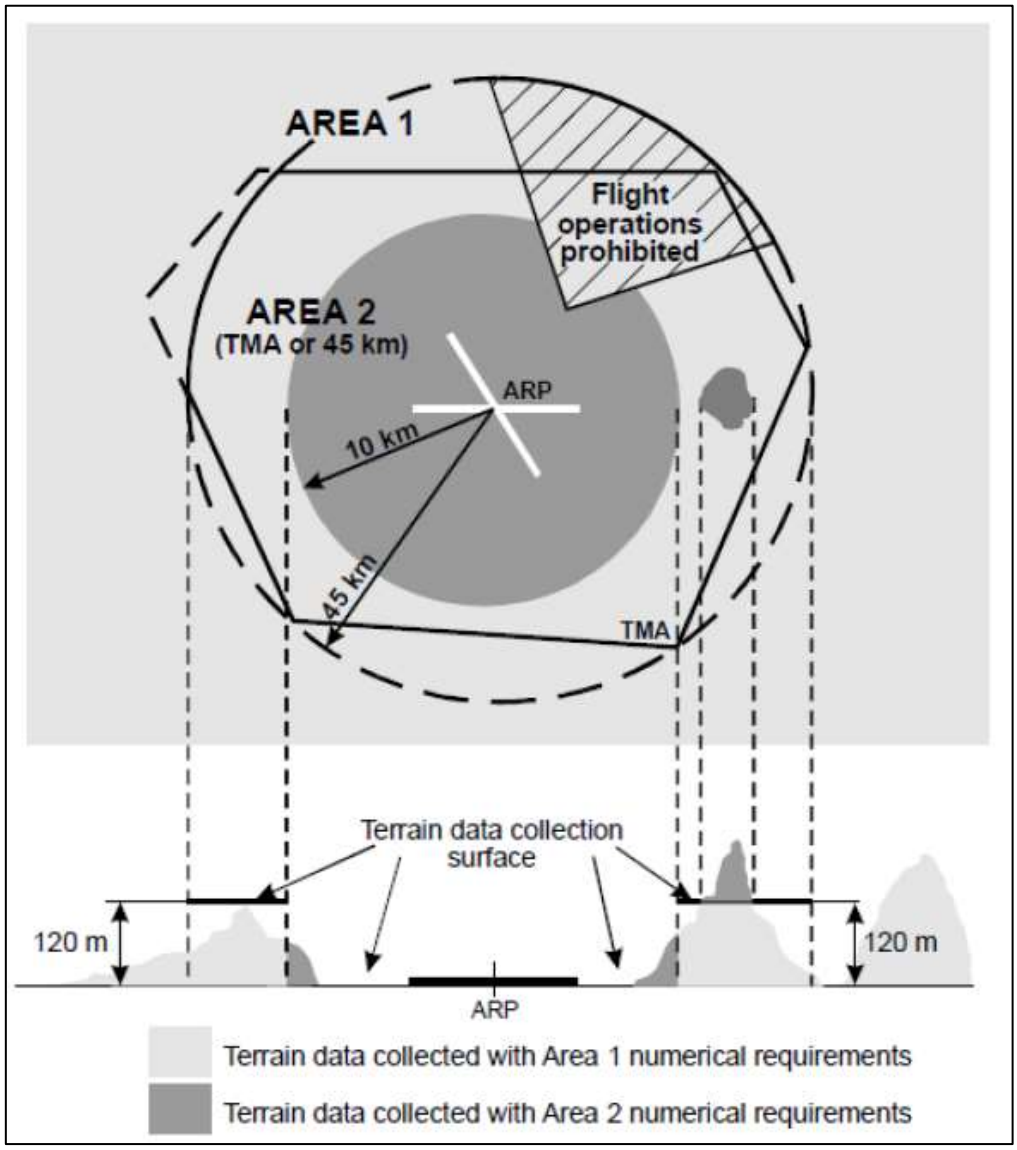


Figure 1 - Terrain data collection surfaces — Area 1 and Area 2

(1) Within the area covered by a 10-km radius from the ARP, terrain data should comply with the Area 2 numerical requirements;

(2) In the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller), data on terrain that penetrates the horizontal plane 120 m above the lowest runway elevation, should comply with the Area 2 numerical requirements;

(3) In the area between 10 km and the TMA boundary or 45-km radius (whichever is smaller), data on terrain that does not penetrate the horizontal plane 120 m above the lowest runway elevation, should comply with the Area 1 numerical requirements;

(4) In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, terrain data should comply with the Area 1 numerical requirements.

(c) A graphical representation of the obstacle data collection surfaces for Areas 1 and 2 is shown in the following figure:

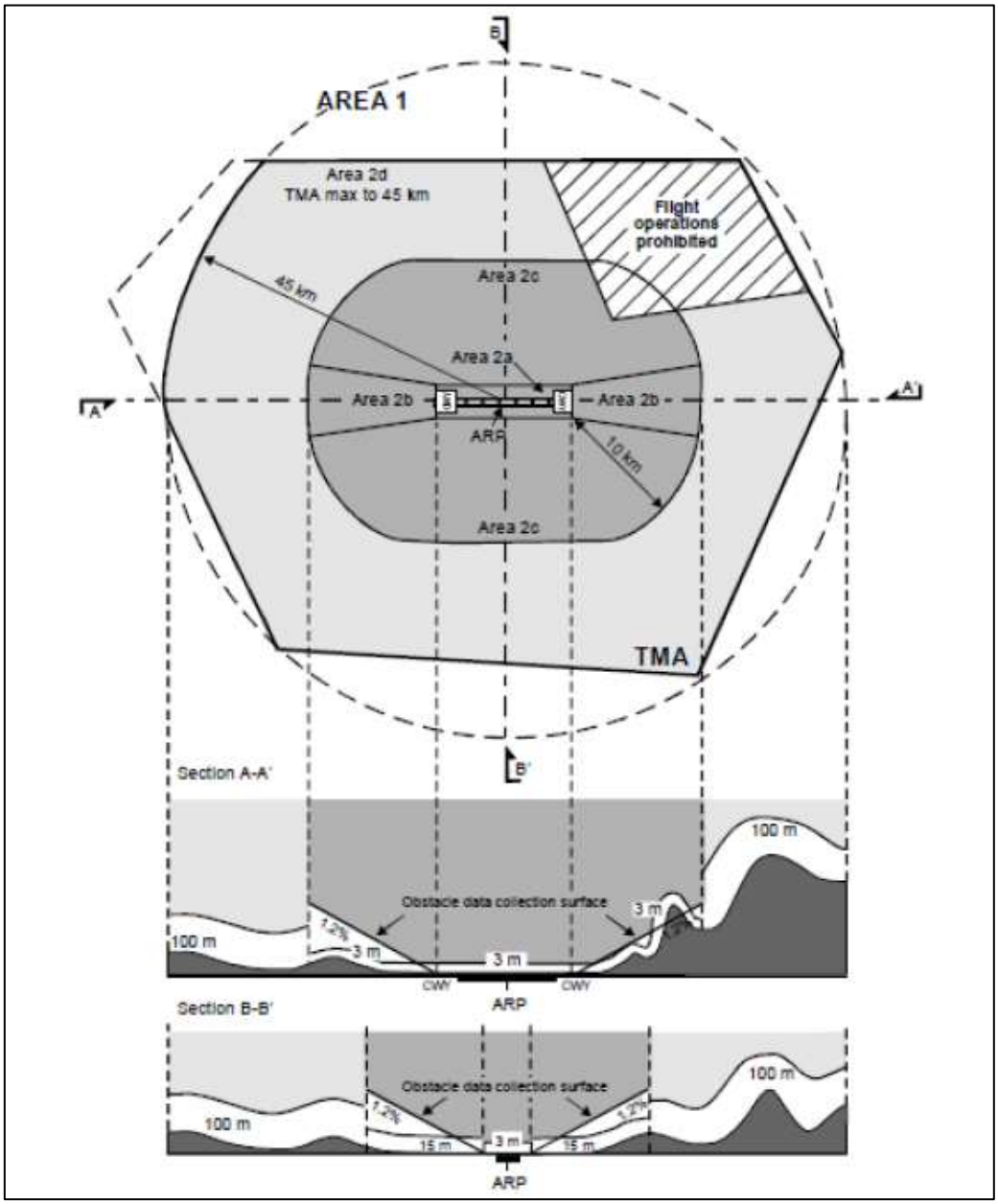


Figure 2 - Obstacle data collection surfaces — Area 1 and Area 2

(1) Obstacle data should be collected and recorded in accordance with the Area 2 numerical requirements;

(i) The Area 2a obstacle collection surface should have a height of 3 m above the nearest runway elevation measured along the runway centre line, and for those portions related to a clearway, if one exists, at the elevation of the nearest runway end;

(ii) The Area 2b obstacle collection surface has an 1.2 % slope extending from the ends of Area 2a at the elevation of the runway end in the direction of departure, with a length of 10 km and a splay of 15 % to each side;

(iii) The Area 2c collection surface has an 1.2 % slope extending outside Area 2a and Area 2b at a distance of not more than 10 km from the boundary of Area 2a. The initial elevation of Area 2c should be the elevation of the point of Area 2a at which it commences; and

(iv) The Area 2d obstacle collection surface has a height of 100 m above ground.

(2) In those portions of Area 2 where flight operations are prohibited due to very high terrain or other local restrictions and/or regulations, obstacle data should be collected and recorded in accordance with the Area 1 requirements;

(3) Data on every obstacle within Area 1 whose height above the ground is 100 m or higher should be collected and recorded in the database in accordance with the Area 1 numerical requirements specified in Table 2.

(d) A graphical representation of the terrain and obstacle data collection surfaces for Area 3 is shown in the following figure:

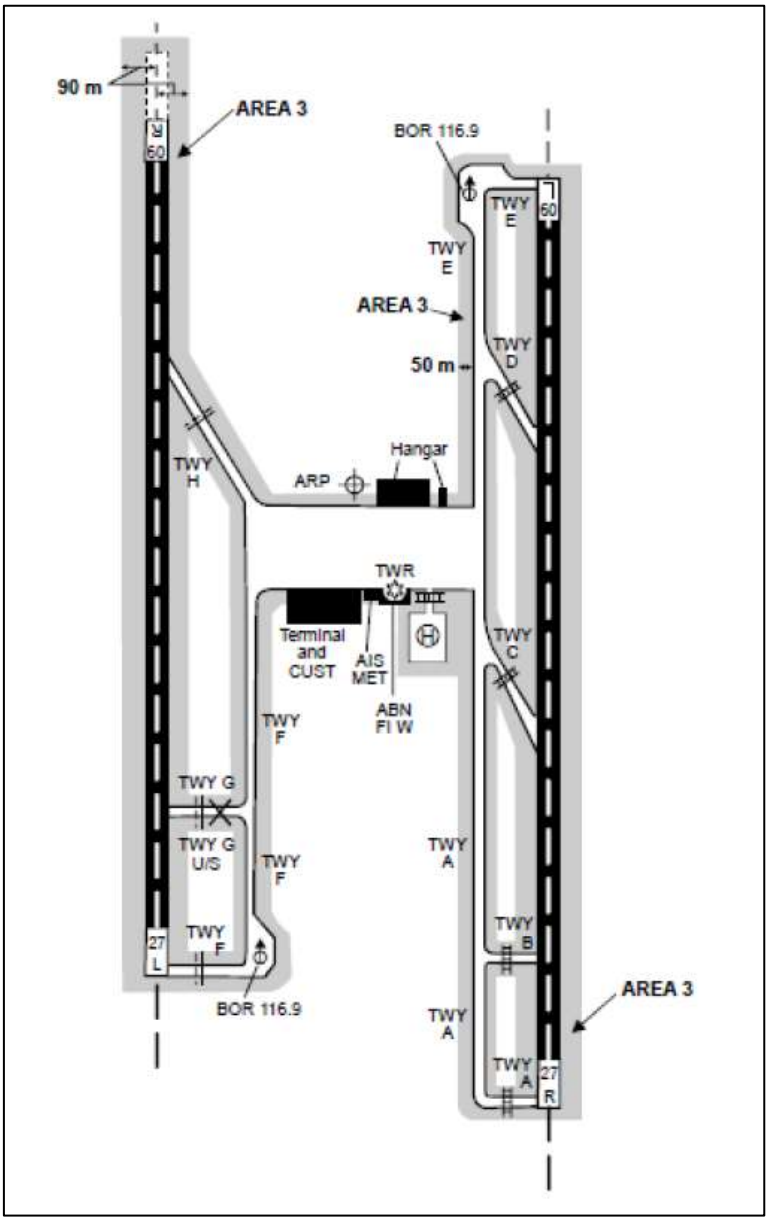


Figure 3 - Terrain and obstacle data collection surface — Area 3

(1) The data collection surface for terrain and obstacles extends a half metre (0.5 m) above the horizontal plane passing through the nearest point on the aerodrome movement area;

(2) Terrain and obstacle data in Area 3 should comply with the numerical requirements specified in Tables 1 and 2, respectively;

(e) A graphical representation of the obstacle data collection surfaces for Areas 4 is shown in the following figure:

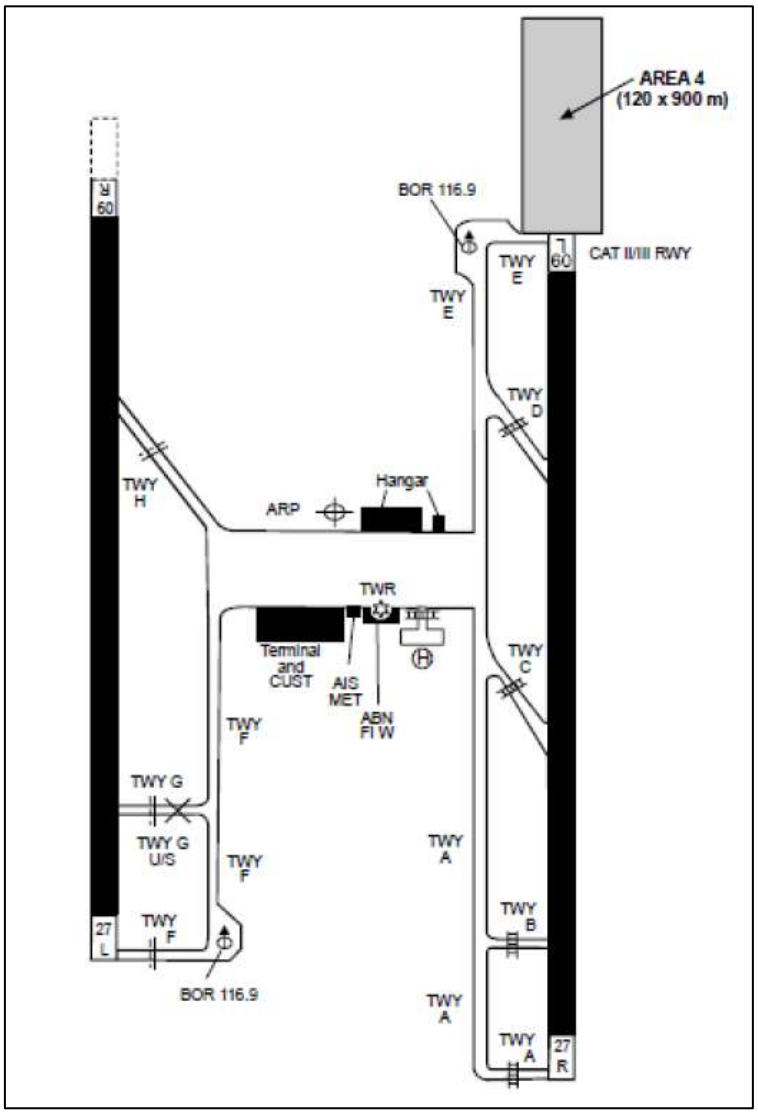


Figure 4 - Terrain and obstacle data collection surface — Area 4

(1) Terrain data in Area 4 should comply with the numerical requirements specified in Table 1;

(2) The horizontal extent of Area 2 covers Area 4. More detailed obstacle data may be collected in Area 4 in accordance with Area 4 numerical requirements for obstacle data specified in Table 2.

(3) Where the terrain at a distance greater than 900 m (3000 ft) from the runway threshold is mountainous or otherwise significant, the length of Area 4 should be extended to a distance not exceeding 2000 m (6500 ft) from the runway threshold.

	Area 1	Area 2	Area 3	Area 4
Post spacing	3 arc seconds (approx. 90 m)	1 arc seconds (approx. 30 m)	0.6 arc seconds (approx. 20 m)	0.3 arc seconds (approx. 9 m)
Vertical accuracy	30 m	3 m	0.5 m	1 m
Vertical resolution	1 m	0.1 m	0.01 m	0.1 m
Horizontal accuracy	50 m	5 m	0.5 m	2.5 m
Confidence level	90 %	90 %	90 %	90 %
Data classification Integrity level	Routine	Essential	Essential	Essential
Maintenance period	as required	as required	as required	as required

Table 1 - Terrain data numerical requirements

	Area 1	Area 2	Area 3	Area 4
Vertical accuracy	30 m	3 m	0.5 m	1 m
Vertical resolution	1 m	0.1 m	0.01 m	0.1 m
Horizontal accuracy	50 m	5 m	0.5 m	2.5 m
Confidence level	90 %	90 %	90 %	90 %
Data classification Integrity level	Routine	Essential	Essential	Essential
Maintenance period	as required	as required	as required	as required

Table 2 - Obstacle data numerical requirements

AMC1 ADR.OPS.A.010 Data quality requirements

GENERAL REQUIREMENTS

(a) The integrity of aeronautical data should be maintained throughout the data process from survey/origin to the next intended user. Based on the applicable integrity classification, the validation and verification procedures should:

(1) for routine data: avoid corruption throughout the processing of the data;

(2) for essential data: assure corruption does not occur at any stage of the entire process and may include additional processes as needed to address potential risks in the overall system architecture to further assure data integrity at this level; and

(3) for critical data: assure corruption does not occur at any stage of the entire process and include additional integrity assurance procedures to fully mitigate the effect of faults identified by thorough analysis of the overall system architecture as potential data integrity risks.

(b) The aerodrome/airport operator should determine and report aerodrome-related aeronautical data in accordance with the accuracy and integrity requirements set in the following tables:

Latitude and longitude	Accuracy Data Type	Integrity Classification
Aerodrome reference point	30 m surveyed/calculated	routine
Navaids located at the aerodrome	3 m surveyed	essential
Obstacles in Area 3	0.5 m surveyed	essential
Obstacles in Area 2 (the part within the aerodrome boundary)	5 m surveyed	essential
Runway thresholds	0.3 m surveyed	critical
Runway end (flight path alignment point)	1 m surveyed	critical
Runway centre line points	1 m surveyed	critical
Runway-holding position	0.5 m surveyed	critical
Taxiway centre line/parking guidance line points	0.5 m surveyed	essential
Taxiway intersection marking line	0.5 m surveyed	essential
Exit guidance line	0.5 m surveyed	essential
Apron boundaries (polygon)	1 m surveyed	routine
De-icing/anti-icing facility (polygon)	1 m surveyed	routine
Aircraft stand points/INS checkpoints	0.5 m surveyed	routine

Table 1 – Latitude and longitude

Elevation/altitude/height	Accuracy Data type	Integrity Classification
Aerodrome elevation	0.5 m surveyed	essential
WGS-84 geoid undulation at aerodrome elevation position	0.5 m surveyed	essential
Runway threshold, non-precision approaches	0.5 m surveyed	essential
WGS-84 geoid undulation at runway threshold, non-precision approaches	0.5 m surveyed	essential
Runway threshold, precision approaches	0.25 m surveyed	critical
WGS-84 geoid undulation at runway threshold, precision approaches	0.25 m surveyed	critical
Runway centre line points	0.25 m surveyed	critical
Taxiway centre line/parking guidance line points	1 m surveyed	essential
Obstacles in Area 2 (the part within the aerodrome boundary)	3 m surveyed	essential
Obstacles in Area 3	0.5 m surveyed	essential
Distance measuring equipment/precision (DME/P)	3 m surveyed	essential

Table 2 – Elevation/Altitude/Height

Declination/variation	Accuracy Data type	Integrity Classification
VHF Navaid Station Declination	1 degree surveyed	essential
Aerodrome magnetic variation	1 degree surveyed	essential
ILS localizer antenna magnetic variation	1 degree surveyed	essential
MLS azimuth antenna magnetic variation	1 degree surveyed	essential

Table 3 – Declination and magnetic variation

Bearing	Accuracy Data type	Integrity Classification
ILS localizer alignment	1/100 degree surveyed	essential
MLS zero azimuth alignment	1/100 degree surveyed	essential
Runway bearing (True)	1/100 degree surveyed	routine

Table 4 – Bearing

Length/distance/dimension	Accuracy Data type	Integrity Classification
Runway length	1 m surveyed	critical
Runway width	1 m surveyed	essential
Displaced threshold distance	1 m surveyed	routine
Stopway length and width	1 m surveyed	critical
Clearway length and width	1 m surveyed	essential
Landing distance available	1 m surveyed	critical
Take-off run available	1 m surveyed	critical
Take-off distance available	1 m surveyed	critical
Accelerate-stop distance available	1 m surveyed	critical
Runway shoulder width	1 m surveyed	essential
Taxiway width	1 m surveyed	essential
Taxiway shoulder width	1 m surveyed	essential
ILS localizer antenna-runway end, distance	3 m calculated	routine
ILS glide slope antenna-threshold, distance along centre line	3 m calculated	routine
ILS marker-threshold distance	3 m calculated	essential
ILS DME antenna-threshold, distance along centre line	3 m calculated	essential
MLS azimuth antenna-runway end, distance	3 m calculated	routine
MLS elevation antenna-threshold, distance along centre line	3 m calculated	routine
MLS DME/P antenna-threshold, distance along centre line	3 m calculated	routine

Table 5 – Length/distance/dimension

(c) Accuracy requirements for aeronautical data should be based upon a 95 % confidence level and, in that respect, three types of positional data should be identified: surveyed points (e.g. runway threshold), calculated points (mathematical calculations from the known surveyed points of points in space, fixes) and declared points (e.g. flight information region boundary points).

(d) Geographical coordinates indicating latitude and longitude should be determined and reported to the aeronautical information services in terms of the World Geodetic System — 1984 (WGS-84) geodetic reference datum, identifying those geographical coordinates which have been transformed into WGS-84 coordinates by mathematical means, and whose accuracy of original field work does not meet the requirements in Table 3.

(e) The order of accuracy of the field work should be such that the resulting operational navigation data for the phases of flight will be within the maximum deviations, with respect to an appropriate reference frame, as indicated in the Tables 3–7.

(f) In addition to the elevation (referenced to mean sea level) of the specific surveyed ground positions at aerodromes, geoid undulation (referenced to the WGS-84 ellipsoid) for those positions as indicated in Tables 3–7, should be determined and reported to the aeronautical information services authority.

(g) Protection of electronic aeronautical data while stored or in transit, should be totally monitored by the cyclic redundancy check (CRC). To achieve protection of the integrity level of critical, and essential aeronautical data as classified in (a)(1) and (a)(2) above, a 32- or 24-bit CRC algorithm should apply respectively.

(h) To achieve protection of the integrity level of routine aeronautical data as classified in (a)(3) above, a 16-bit CRC algorithm should apply.

(i) The aerodrome/airport operator should implement the procedures to:

(1) monitor data relevant to the aerodrome and available services originating from the aerodrome/airport operator, and promulgated by the relevant air traffic services providers;

(2) notify the relevant aeronautical information services, and air traffic services providers of any changes necessary to ensure correct and complete data relevant to the aerodrome, and available services.

AMC2 ADR.OPS.A.010 Data quality requirements

FORMAL ARRANGEMENTS

(a) Organizations concerned

The aerodrome/airport operator should have formal arrangements with public or private entities providing:

(1) air navigation services;

(2) services for the origination and provision of survey data;

(3) procedure design services;

(4) electronic terrain data; and

(5) electronic obstacle data,

with which it exchanges aeronautical data and/or aeronautical information.

(b) Content of formal arrangements

Such formal arrangements should include the following minimum content:

(1) the scope of aeronautical data or aeronautical information to be provided;

(2) the accuracy, resolution, and integrity requirements for each data item supplied;

(3) the required methods for demonstrating that the data provided conforms with the specified requirements;

(4) the nature of action to be taken in the event of discovery of a data error, or inconsistency in any data provided;

(5) the following minimum criteria for notification of data changes:

(i) criteria for determining the timeliness of data provision based on the operational or safety significance of the change;

(ii) any prior notice of expected changes;

(iii) the means to be adopted for notification;

(6) the party responsible for documenting data changes;

(7) the means to resolve any potential ambiguities caused where different formats are used to exchange aeronautical data or aeronautical information;

(8) any limitations on the use of data;

(9) requirements for the production of quality reports by data providers to facilitate verification of data quality by the data users;

(10) metadata requirements; and

(11) contingency requirements concerning the continuity of data provision.

GM1 ADR.OPS.A.010 Data quality requirements

Information in respect to the processing of aeronautical data and aeronautical information is contained in RTCA Document DO-200A and European Organization for Civil Aviation Equipment (EUROCAE) Document ED-76A – Standards for Processing Aeronautical Data.

AMC1 ADR.OPS.A.015 Coordination between aerodrome/airport operators and providers of aeronautical information services

REPORTING

(a) The aerodrome/airport operator should report on matters of operational significance or affecting aircraft and aerodrome operations in order to take appropriate action, particularly in respect of the following:

(1) construction or maintenance work;

(2) rough or broken surfaces on a runway, a taxiway, or an apron;

(3) snow, slush ice or frost on a runway, a taxiway, or an apron;

(4) water on a runway, a taxiway, or an apron;

(5) snow banks or drifts adjacent to a runway, a taxiway, or an apron;

(6) anti-icing or de-icing liquid chemicals, or other contaminants on a runway, a taxiway, or an apron;

(7) other temporary hazards, including parked aircraft;

(8) failure or irregular operation of part or all of the aerodrome visual aids; and

(9) failure of the normal or secondary power supply.

(b) A change in the level of protection normally available at an aerodrome for rescue and firefighting should be expressed in terms of the new category available at the aerodrome. When such a change has been corrected, the air traffic services provider and the aeronautical information services providers should be advised accordingly.

(c) The aerodrome/airport operator should observe the predetermined, internationally agreed AIRAC effective dates in addition to 14-day postage time when submitting the raw information/data to aeronautical information services that affect charts and/or computer-based navigation systems which qualify to be notified by the aeronautical information regulation and control (AIRAC) system.

***Note**. — The nature, format and conditions of the information to be provided are specified in the PANS-AIM (Doc 10066) and the PANS-ATM (Doc 4444). Specific procedures pertaining to works in progress on the movement area and to the reporting of such works are specified in the PANS-Aerodromes (Doc 9981)*

[According to Order no. 44/GEN from 21.10.2020]

SUBPART B — AERODROME OPERATIONAL SERVICES, EQUIPMENT, AND INSTALLATIONS

GM1 ADR.OPS.B.001 Provision of services

SERVICES

The services included in Part B of this Annex, need to be provided at an aerodrome. In some cases, these services are not directly provided by the aerodrome/airport operator, but by another organization or State entity or combination of both. However, the aerodrome/airport operator, being responsible for the operation of the aerodrome should have arrangements and interfaces with these organizations or entities to ensure that these services are provided according to the legal requirements. The method described above meets with the intention of an integrated Safety Management System that helps the aerodrome/airport operator to ensure the safety objective of the service provision is being met. In completing this action, the aerodrome/airport operator should hereby been seen to discharge its responsibility by employing the procedures mentioned above, furthermore, the aerodrome/airport operator should not be understood to be directly responsible or liable for non-compliances by another entity involved in the arrangement.

AMC1 ADR.OPS.B.005(b) Aerodrome Emergency Planning

GENERAL

(a) The aerodrome/airport operator should ensure that the aerodrome emergency plan includes the ready availability of, and coordination with, appropriate specialist rescue services to be able to respond to emergencies where an aerodrome is located close to water and/or swampy areas, and where a significant portion of approach or departure operations takes place over these areas.

(b) The aerodrome/airport operator should ensure that an assessment of the approach and departure areas within 1000 m of the runway threshold is carried out to determine the options available for intervention.

AMC2 ADR.OPS.B.005(b) Aerodrome Emergency Planning

AERODROME EMERGENCY PLAN DOCUMENT

The aerodrome/airport operator should include, at least, the following in the aerodrome emergency plan document:

(a) Types of emergencies planned for;

(b) Agencies involved in the plan, and details of the aerodrome and local emergency planning arrangements and forums;

(c) Responsibility and role of each agency, the emergency operations centre, and the command post for each type of emergency;

(d) Information on names and telephone numbers of offices or people to be contacted in the case of a particular emergency; and

(e) A grid map of the aerodrome and its immediate surroundings, approximately at a distance of 8 km from the centre of the aerodrome.

AMC1 ADR.OPS.B.005(c) Aerodrome emergency planning

AERODROME EMERGENCY EXERCISE

The aerodrome/airport operator should ensure that the emergency plan is tested with:

(a) a full-scale aerodrome emergency exercise at intervals not exceeding two years; and

(b) partial emergency exercises in the intervening year to ensure that any deficiencies found during the full-scale aerodrome emergency exercise have been corrected

and reviewed thereafter, or after an actual emergency, so as to correct any deficiency found during such exercises or actual emergency.

GM1 ADR.OPS.B.005(a) Aerodrome emergency planning

PURPOSE OF THE AERODROME EMERGENCY PLAN

(a) In many cases the aerodrome emergency plan is part of a National or Local Emergency Plan, and the responsibility for its development is assigned to another entity, different from the aerodrome/airport operator. However, this does not prevent the aerodrome/airport operator from preparing its own plan describing the actions that should be taken during an emergency, in cooperation with the authorities which are responsible for the National or Local Emergency Plan.

(b) Irrespective of whose responsibility is the establishment and implementation of an emergency plan covering emergencies at or in the surroundings of an aerodrome, the emergency plan should ensure that there are provisions for:

(1) orderly and efficient transition from normal to emergency operations;
(2) delegation of authority;
(3) assignment of emergency responsibilities;
(4) authorizing key personnel for actions contained in the plan;
(5) coordination of efforts to cope with the emergency; and
(6) safe continuation of aircraft operations or return to normal operations as soon as possible.

GM2 ADR.OPS.B.005(a) Aerodrome emergency planning

AERODROME EMERGENCY PLAN DOCUMENT

(a) The aerodrome emergency plan of the aerodrome/airport operator should observe human factors principles to ensure optimum response in emergency operations.

Note 1. *— Guidance material on Human Factors principles can be found in the Human Factors Training Manual (Doc 9683).*

Note 2*. — General principles and procedures on the training of aerodrome personnel, including training programmes and competence checks, are specified in the PANS-Aerodromes (Doc 9981)'*

[According to Order no. 44/GEN from 21.10.2020]

(b) In order to ensure that the aerodrome emergency plan document fully serves its purpose, it should include the following:

(1) plans for dealing with emergencies occurring at the aerodrome or in its surroundings, including the malfunction of aircraft in flight; structural fires; sabotage, including bomb threats (aircraft or structure); unlawful seizure of aircraft; and incidents on the aerodrome covering 'during the emergency' and 'after the emergency' considerations;
(2) details of tests for aerodrome facilities and equipment to be used in emergencies such as emergency operations centre, mobile command post, firefighting vehicles and equipment, communication means, first aid medical supplies, etc., including the frequency of those tests;
(3) details of exercises to test emergency plans, including the frequency of those exercises;
(4) a list of organizations, agencies, and persons of authority, both on and off-aerodrome, for site roles; their telephone and fax numbers, e-mail and SITA addresses, and the radio frequencies of their offices;
(5) the establishment of an aerodrome emergency committee to organise training and other preparations for dealing with emergencies;
(6) the appointment of an on-the-scene commander for the overall emergency operation; and
(7) Details of the off aerodrome areas for which the aerodrome RFFS will provide a response, and the size and nature of the response.

GM3 ADR.OPS.B.005(a) Aerodrome emergency planning

CONTENTS OF AN AERODROME EMERGENCY PLAN DOCUMENT

The purpose of the aerodrome Emergency Plan Document is to provide all the required information to agencies and staff involved in an emergency. The document should be structured in such a manner, that the required information is easily identifiable. For that purpose, the structure of the aerodrome emergency plan should be as follows:

Section 1 — Emergency telephone numbers

This section should be limited to essential telephone, numbers according to the aerodrome needs, including:

(a) air traffic services unit;
(b) rescue and firefighting services (fire departments);
(c) airfield operations department;
(d) police and security;
(e) medical services:
    (1) hospitals;
    (2) ambulances; and
    (3) doctors — business/residence;
(f) aircraft operators;
(g) ground handling agencies;
(h) government authorities;
(i) civil defence; and
(j) others.

Section 2 — Aircraft accident on the aerodrome

(a) Action by air traffic services unit;
(b) Action by rescue and firefighting services;
(c) Action by police and security services;
(d) Action by the aerodrome/airport operator:
    (1) vehicle escort; and
    (2) maintenance;
(e) Action by medical services:
    (1) hospitals;
    (2) ambulances;
    (3) doctors; and
    (4) medical personnel.
(f) Action by aircraft operator involved;
(g) Action by emergency operations centre and mobile command post;
(h) Action by government authorities;
(i) Communication network (emergency operations centre and mobile command post);
(j) Action by agencies organizations involved in mutual aid emergency agreements;
(k) Action by transportation authorities (land, sea, air);
(l) Action by public information officer(s);
(m) Action by local fire departments when structures involved; and
(n) Action by all other agencies.

Section 3 — Aircraft accident off the aerodrome

(a) Action by air traffic services unit;

(b) Action by rescue and firefighting services;
(c) Action by local fire departments;
(d) Action by police and security services;
(e) Action by aerodrome/airport operator;
(f) Action by medical services;
    (i) hospitals;
    (ii) ambulances;
    (iii) doctors; and
    (iv) medical personnel.
(g) Action by agencies involved in mutual aid emergency agreements;
(h) Action by aircraft operator involved;
(i) Action by emergency operations centre and mobile command post;
(j) Action by government authorities;
(k) Action by communication networks (emergency operations centre and mobile command post);
(l) Action by transportation authorities (land, sea, air);
(m) Action by public information officer; and
(n) Action by all other agencies.

Section 4 — Malfunction of aircraft in flight (Full emergency or local standby)

(a) Action by air traffic services unit;
(b) Action by aerodrome rescue and firefighting services;
(c) Action by police and security services;
(d) Action by the aerodrome/airport operator;
(e) Action by medical services:
    (1) hospitals;
    (2) ambulances;
    (3) doctors; and
    (4) medical personnel.
(f) Action by aircraft operator involved;
(g) Action by emergency operations centre and mobile command post; and
(h) Action by all other agencies.

Section 5 — Structural fires

(a) Action by air traffic services unit;
(b) Action by rescue and firefighting services (local fire department);
(c) Action by police and security services;
(d) Action by aerodrome authority;
(e) Evacuation of structure;
(f) Action by medical services:
    (1) hospitals;
    (2) ambulances;
    (3) doctors; and
    (4) medical personnel.
(g) Action by emergency operations centre and mobile command post;
(h) Action by public information officer; and
(i) Action by all other agencies.

Section 6 — Sabotage including bomb threat (aircraft or structure)

(a) Action by air traffic services unit;
(b) Action by emergency operations centre and mobile command post;
(c) Action by police and security services;
(d) Action by the aerodrome/airport operator;
(e) Action by rescue and firefighting services;
(f) Action by medical services:
    (1) hospitals;
    (2) ambulances;
    (3) doctors; and
    (4) medical personnel.
(g) Action by aircraft operator involved;
(h) Action by government authorities;
(i) Isolated aircraft parking position;
(j) Evacuation;
(k) Searches by dogs and trained personnel;
(l) Handling and identification of luggage and cargo on board aircraft;
(m) Handling and disposal of suspected bomb;
(n) Action by public information officer; and
(o) Action by all other agencies.

Section 7 — Unlawful seizure of aircraft

(a) Action by air traffic services unit;
(b) Action by rescue and firefighting services;
(c) Action by police and security services;
(d) Action by the aerodrome/airport operator;
(e) Action by medical services;
    (1) hospitals;
    (2) ambulances;
    (3) doctors; and
    (4) medical personnel.
(f) Action by aircraft operator involved;
(g) Action by government authorities;
(h) Action by emergency operations centre and mobile command post;
(i) Isolated aircraft parking position;
(j) Action by public information officer; and
(k) Action by all other agencies.

Section 8 — Incident on the aerodrome

An incident on the aerodrome could require any, or all of the actions detailed in Section 2, 'Aircraft accident on the aerodrome'. Examples of incidents the aerodrome operator should consider to include: fuel spills at the ramp, passenger loading bridge, and fuel storage area; dangerous goods occurrences at freight handling areas; collapse of structures; vehicle/aircraft collisions; etc.

Section 9 — Persons of authority — site roles

To include, but not limited to, the following, according to local requirements:

(a) On-aerodrome:

(1) Aerodrome chief fire officer;
(2) Aerodrome authority;
(3) Police and security — Officer-in-charge; and
(4) Medical coordinator.

(b) Off-aerodrome:
(1) Local chief fire officer;
(2) Government authority; and
(3) Police and security — officer-in-charge.

The on-the-scene commander will be designated as required from within the pre-arranged mutual aid emergency agreement.

GM4 ADR.OPS.B.005(a) Aerodrome Emergency Planning

TYPES OF EMERGENCIES

(a) At least the following types of emergencies may be included in the aerodrome emergency plan:
(1) Aircraft emergencies;
(2) Aircraft ground incidents, where an aircraft on the ground is known to have an emergency situation other than an accident, requiring the attendance of emergency services;
(3) Sabotage, including bomb threats;
(4) Unlawfully seized aircraft;
(5) Dangerous goods occurrences;
(6) Building fires;
(7) Natural disasters; and
(8) Public health emergencies.

(b) The aircraft emergencies for which services may be required are generally classified as:
(1) 'aircraft accident': an aircraft accident which has occurred on or in the aerodrome surroundings;
(2) 'full emergency': an aircraft approaching the aerodrome is, or is suspected to be, in such trouble that there is imminent danger of an accident; and
(3) 'local standby': an aircraft approaching the aerodrome is known. or is suspected to have developed some defect, but the trouble is not such as would normally involve any serious difficulty in effecting a safe landing.

GM5 ADR.OPS.B.005(a) Aerodrome emergency planning

DISABLED AIRCRAFT REMOVAL

(a) The aerodrome/airport operator should establish a plan for the removal of an aircraft disabled on, or adjacent to, the movement area, and a coordinator designated to implement the plan, when necessary.

(b) The disabled aircraft removal plan should be based on the characteristics of the aircraft that may normally be expected to operate at the aerodrome, and include among other things:
(1) a list of equipment and personnel on, or in the surroundings of, the aerodrome which would be available for such purpose; and
(2) arrangements for the rapid receipt of aircraft recovery equipment kits available from other aerodromes;

GM1 ADR.OPS.B.005(b) Aerodrome emergency planning

COORDINATION WITH OTHER AGENCIES AND ORGANIZATIONS

(a) The aerodrome emergency plan should describe the procedures for coordinating the response of different aerodrome agencies organizations or services (e.g. ground handlers, airlines, security services) and those agencies in the surrounding community that could be of assistance in responding to an emergency.

(b) If the aerodrome emergency plan is not part of a National or Local Emergency Plan, then it should be coordinated as required.

(c) Emergency mutual aid agreements should be established to define responsibilities and/or liabilities of each external agency responding to an emergency. These agreements should include the following:

(1) clarification of the political and jurisdictional responsibilities of the several agencies (e.g. police, local firefighting services, local authorities, accident investigation bodies, etc.) that could be involved in order to avoid problems when an emergency occurs;

(2) establishment of the command authority; i.e. a single on-the-scene commander (with designated alternates if necessary);

(3) designation of communication priorities at the accident site;

(4) organization of emergency transportation facilities under (a) pre-designated coordinator(s);

(5) predetermination of the legal authorities and liabilities of all cooperating emergency personnel; and

(6) pre-arrangements for use of portable and heavy rescue equipment from available sources.

(d) The aerodrome emergency plan should be implemented similarly whether it is an on-aerodrome or an off-aerodrome aircraft accident/incident.

(e) Rendezvous signs and directional arrows should be consistent, and conform to national standards.

(f) The aerodrome/airport operator should assess the level of medical supplies to be held on the aerodrome for emergency purposes.

GM2 ADR.OPS.B.005(b) Aerodrome emergency planning

INVOLVED AGENCIES IN EMERGENCIES

The following agencies could participate in response to an emergency, depending on the type of emergency and local arrangements:

(a) On the aerodrome:

(1) Air Traffic Control Unit;

(2) Rescue and firefighting services;

(3) Aerodrome administration;

(4) Medical and ambulance services;

(5) Aircraft operators;

(6) Ground handling agencies;

(7) Security services; and

(8) Police.

(b) Off the aerodrome:

(1) Fire departments;

(2) Police;

(3) Health authorities (including medical, ambulance, hospital and public health services);

(4) Military; and

(5) Harbour or coast guard, if applicable.

GM3 ADR.OPS.B.005(b) Aerodrome emergency planning

EMERGENCY OPERATIONS CENTRE

(a) The practice had shown that emergencies are handled more efficiently centrally through an emergency operations centre and a command post.

(b) The emergency operations centre could be a part of the aerodrome facilities, and responsible for the overall coordination and general direction of the response to an emergency. Depending on the size of the aerodrome and local procedures, more than one emergency centers could be established, but within the aerodrome emergency plan should be identified which of them has the overall responsibility for coordination.

(c) A person should be assigned to assume control of the emergency operations centre and, when appropriate, another person the command post.

(d) The role of the emergency operations centre should be to support the on-the-scene commander in the mobile command post for aircraft accidents/incidents.

(e) The emergency operations centre, depending on relevant security plans and local procedures could be the command, coordination, and communication centre for unlawful seizure of aircraft and bomb threats.

(f) The emergency operations centre should be operationally available 24 hours a day, or during the aerodrome's hours of operation, and procedures should be established for notifying its staff.

(g) The location of the emergency operation centre is very important for its efficiency. Consideration should be given to establish its location having a clear view of the movement area and isolated aircraft parking position, wherever possible.

(h) Adequate equipment and personnel should be available in order to communicate with the appropriate agencies involved in the emergency, including the mobile post, when this is deployed. The communication and electronic devices should be checked regularly, to identify any malfunctions.

GM4 ADR.OPS.B.005(b) Aerodrome emergency planning

MOBILE COMMAND POST

(a) The command post is a facility capable of being moved rapidly to the site of an emergency, when required, and undertakes the local coordination of those agencies responding to the emergency.

(b) The mobile command post, when established, should contain the necessary equipment and personnel to communicate with all agencies involved in the emergency, including the emergency operations centre. The communication and electronic devices should be checked regularly, in order to identify any malfunctions.

(c) Maps, charts, and other relevant equipment and information should be available at the mobile command post.

GM5 ADR.OPS.B.005(b) Aerodrome emergency planning

COMMUNICATION SYSTEMS USED FOR EMERGENCIES

(a) When established, adequate communication systems linking the command post and the emergency operations centre with each other and with the participating agencies should be provided in accordance with the plan and consistent with the particular requirements of the aerodrome.

(b) The communication systems used should include a sufficient number of radio transceivers, telephones, and other communication devices to establish and maintain a primary, and a secondary means of communication;

(c) The role of the communication systems is to provide a primary, and, where necessary, an alternate means for effective direct communications between the following, as applicable:

(1) the alerting authority and the rescue and firefighting (RFF) units serving the aerodrome;

(2) air traffic services unit, the appropriate fire department alarm room/dispatch centre(s) and the firefighting and rescue crews enroute to an aircraft emergency and at the accident/incident site;

(3) appropriate mutual aid agencies located on or off the aerodrome, including an alert procedure for all auxiliary personnel expected to respond; and

(4) the RFF vehicles, including a communication capability between crew members on each RFF vehicle.

(d) A communications system should be established in order to provide rapid response of the emergency equipment to accidents and incidents occurring in the terminal areas, and at the apron. Apron accidents include aircraft cabin fires, refuelling spills and fires, aircraft and vehicle collisions, and medical emergencies.

(e) Communication systems used during emergencies should be tested regularly to verify the operability of all radio and telephone networks.

(f) A complete and current list of interagency telephone numbers should be available to all agencies and to personnel responsible for the aerodrome emergency plan, to ensure rapid notification in case of emergencies. These phone numbers should be verified frequently to ensure they are correct. Updated lists should be distributed to all emergency plan participants on a continual basis.

GM1 ADR.OPS.B.005(c) Aerodrome emergency planning

EMERGENCIES IN DIFFICULT ENVIRONMENT

At those aerodromes located close to water and/or swampy areas, or difficult terrain, the aerodrome emergency plan should include the establishment, testing, and assessment at regular intervals of a predetermined response for the specialist rescue services.

GM2 ADR.OPS.B.005(c) Aerodrome emergency planning

EMERGENCY EXERCISES

(a) Full-scale exercises

(1) The purpose of a full-scale exercise is to ensure the adequacy of the plan to cope with different types of emergencies.

(2) Full-scale emergency exercises should be supported by all aerodrome and community authorities concerned.

(3) Objectives of the exercise should be defined.

(4) Involved departments and agencies should be thoroughly familiar with the aerodrome emergency plan, and develop individual plans in coordination with the general plan.

(5) The emergency exercises should be held in locations which will provide maximum realism while ensuring minimum disruption of the aerodrome operations. Different scenarios, as described in the aerodrome emergency plan document, should be used. The exercise could be held either during the day or at night on the aerodrome, and at different times of the year when seasonal changes

may present additional challenges. Exercises may take place both on or near the aerodrome to test different scenarios.

(6) In order to obtain the maximum benefit from a full-scale emergency exercise, the entire proceedings should be reviewed. An observer critique team should be organized, comprised of members who are familiar with mass casualty accident proceedings. Each member of the critique team should observe the entire exercise, and complete the appropriate emergency drill critique forms. As soon as convenient after the exercise, a critique meeting should be held so members of the team can present their observations and recommendations for improvement of the aerodrome emergency plan procedures and associated aerodrome emergency plan document.

(7) The exercise should be followed by a full debriefing, critique, and analysis. It is important that representatives of all organizations which participate in the exercise actively participate in the critique.

(b) Partial emergency exercises

(1) The purpose of a partial exercise is to ensure the adequacy of the response to individual participating agencies and components of the plan.

(2) Partial emergency exercises should involve, at least, one unit, such as rescue and firefighting services, or medical, or combination of several units, as appropriate.

(3) Partial emergency exercises should ensure that any deficiencies found during the full-scale aerodrome emergency exercise have been corrected.

(c) Tabletop exercises

Tabletop exercises should be held at regular intervals. The aim of these exercises should be to verify that roles and procedures are clear and understood. These exercises offer a good opportunity to test new or revised procedures, before implementation, or preparation for a full-scale emergency exercise.

GM1 ADR.OPS.B.010(a)(1) Rescue and firefighting services

AVAILABILITY AND SCOPE OF RESCUE AND FIREFIGHTING SERVICES

Public or private organizations, suitably located and equipped, could be designated to provide the rescue and firefighting service. The fire station housing these organizations should normally be located on the aerodrome, although an off-aerodrome location is not precluded, provided that the response time can be met. The principal objective of rescue and firefighting services is to save lives in the event of an aircraft accident or incident occurring at, or in the immediate surroundings of, the aerodrome. The rescue and firefighting service is provided to create and maintain survivable conditions, to provide egress routes for occupants, and to initiate the rescue of those occupants unable to make their escape without direct aid. The rescue may require the use of equipment and personnel other than those assessed primarily for rescue and firefighting purposes. Ambulance and medical services are out of the scope of rescue and firefighting services as described in ADR.OPS.B.010. The role and responsibilities of ambulance and medical services during an emergency situation should be included in the aerodrome emergency plan (AEP), according to GM3 ADR.OPS.B.005(a).

AMC1 ADR.OPS.B.010(a)(2) Rescue and firefighting services

COMMUNICATION AND ALERTING SYSTEMS

The aerodrome/airport operator should ensure that:

(a) a discrete communication system is provided linking a fire station with the control tower, any other fire station on the aerodrome, and the rescue and firefighting vehicles;

(b) an alerting system for rescue and firefighting personnel, capable of being operated from that station, is provided at the fire station, any other fire station on the aerodrome, and the aerodrome control tower;

(c) means are provided for communication between the rescue and firefighting service and the flight crew of an aircraft in emergency;
(d) communication means are provided to ensure the immediate summoning of designated personnel not on standby duty;
(e) communication means are provided to ensure two-way communication with the rescue and firefighting vehicles in attendance at an aircraft accident or incident.
(f) communications during emergencies should be recorded; and
(g) communication means are provided between rescue and firefighting crew members.

AMC2 ADR.OPS.B.010(a)(2) Rescue and firefighting services

RFFS LEVEL OF PROTECTION

(a) The aerodrome/airport operator should ensure that:
(1) the level of protection normally available at an aerodrome is determined and expressed in terms of the category of the rescue and firefighting services (RFF aerodrome category) as described below and in accordance with the types, amounts, and discharge rates of extinguishing agents normally available at the aerodrome; and
(2) the aerodrome category for rescue and firefighting is determined according to the Table 1, based on the longest aeroplanes normally using the aerodrome and their fuselage width. If, after selecting the category appropriate to the longest aeroplane's overall length, that aeroplane's fuselage width is greater than the maximum width in Table 1, column 3, for that category, then the category for that aeroplane should actually be one category higher.

Aerodrome category for rescue and firefighting		
Aerodrome Category (1)	Aeroplane overall length (2)	Maximum fuselage width (3)
1	0 m up to but not including 9 m	2 m
2	9 m up to but not including 12 m	2 m
3	12 m up to but not including 18 m	3 m
4	18 m up to but not including 24 m	4 m
5	24 m up to but not including 28 m	4 m
6	28 m up to but not including 39 m	5 m
7	39 m up to but not including 49 m	5 m
8	49 m up to but not including 61 m	7 m
9	61 m up to but not including 76 m	7 m
10	76 m up to but not including 90 m	8 m

Table 1

Note 1. *—See guidance in the* Airport Services Manual *(Doc 9137), Part 1, for categorizing aerodromes, including those for all-cargo aircraft operations, for rescue and firefighting purposes.*

Note 2*. — Principles and procedures on training, including training programmes and competence checks, are specified in the PANS-Aerodromes (Doc 9981). Further Guidance on the training of personnel, rescue equipment for*

difficult environments and other facilities and services for rescue and firefighting is given in Attachment A, Section 18, and in the Airport Services Manual *(Doc 9137), Part 1.*

[According to Order no. 44/GEN from 21.10.2020]

(3) the rescue and firefighting level of protection provided is appropriate to the aerodrome category determined using the principles in (2) above except that where the number of movements (landing or take-off) of the aeroplanes performing passenger transportation in the highest category, normally using the aerodrome, is less than 700 in the busiest consecutive three months, the level of protection provided in accordance with (2) above may be reduced by no more than one category below the determined one.

(b) Notwithstanding (a), the aerodrome/airport operator may, during anticipated periods of reduced activity (e.g. specific periods of the year or day), reduce the rescue and firefighting level of protection available at the aerodrome. In this case:

(1) the level of protection should be no less than that needed for the highest category of aeroplane planned to use the aerodrome during that time, irrespective of the number of movements.; and

(2) the periods of aerodrome operation with reduced rescue and firefighting level of protection should be published in the aeronautical information publication (AIP) or through notice to airmen (NOTAM).

(c) The level of protection required for all-cargo, mail, ferry, training, test, positioning and end-of-life aeroplane operations, including those carrying dangerous goods, irrespective of the number of movements, may be reduced in accordance with Table 2 as follows:

Aerodrome Category	RFF level of protection required
1	1
2	2
3	3
4	4
5	5
6	5
7	6
8	6
9	7
10	7

Table 2

(d) The aerodrome/airport operator, in order to assess whether the rescue and firefighting level of protection to be provided at the aerodrome is appropriate to the aerodrome rescue and firefighting category, should, at least annually, forecast the aeroplane traffic expected to operate at the aerodrome for the next twelvemonth period. Upon knowledge of planned changes to traffic volume and structure, additional assessments might be necessary. In doing so, the aerodrome operator may use all information available from aeroplane operators as well as statistics on aeroplane movements during the year preceding the day of review.

(e) Unforeseen circumstances leading to temporary reduction of the aerodrome rescue and firefighting level of protection are considered as unplanned events that result in unavailability of facilities, equipment and resources.

(f) For emergency landings and occasions when in the pilot's-in-command opinion, a diversion or hold may create a more significant hazard, operation of aeroplanes whose required category is higher than the level of protection provided by the aerodrome should be permitted regardless of the rescue and firefighting level of protection available.

AMC3 ADR.OPS.B.010(a)(2) Rescue and firefighting services

NUMBER OF RFFS VEHICLES AND RESCUE EQUIPMENT

(a) The aerodrome/airport operator should ensure that:

(1) the minimum number of rescue and firefighting vehicles at the aerodrome will be in accordance with the following table; and

Aerodrome category	Rescue and firefighting vehicles
1	1
2	1
3	1
4	1
5	1
6	2
7	2
8	3
9	3
10	3

Table 1

(2) rescue equipment commensurate with the level of aircraft operations is provided on the rescue and firefighting vehicles.

(b) If the aerodrome is located near a water/swampy area, or other difficult environment, or a significant portion of the approach/departure operations takes over these areas, the aerodrome operator should coordinate the availability of suitable rescue equipment and services.

AMC4 ADR.OPS.B.010(a)(2) Rescue and firefighting services

EXTINGUISHING AGENTS

The aerodrome/airport operator should ensure that:

(a) both principal and complementary extinguishing agents are provided at the aerodrome;

(b) principal extinguishing agent includes:

(1) a foam meeting the minimum performance level A; or

(2) a foam meeting the minimum performance level B; or

(3) a foam meeting the minimum performance level C; or

(4) a combination of these agents;

except for aerodromes in categories 1 to 3, where it should preferably meet a performance level B or C foam;

(c) the complementary extinguishing agent is a dry chemical powder suitable for extinguishing hydrocarbon fires, or any other alternate agent having equivalent firefighting capability;

(d) the amounts of water for foam production, and of the complementary agents provided on the rescue and firefighting vehicles are in accordance with the determined aerodrome category and Table 1

Minimum usable amounts of extinguishing agents								
	Foam meeting performance level A		Foam meeting performance level B		Foam meeting performance level C		Complementary agents	
Aerodrome category	Water (L)	Discharge rate foam solution/ minute (L)	Water (L)	Discharge rate foam solution/ minute (L)	Water (L)	Discharge rate foam solution/ minute (L)	Dry chemical powders (kg)	Discharge rate (kg/sec)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	350	350	230	230	160	160	45	2.25
2	1 000	800	670	550	460	360	90	2.25
3	1 800	1 300	1 200	900	820	630	135	2.25
4	3 600	2 600	2 400	1800	1 700	1 100	135	2.25
5	8 100	4 500	5 400	3 000	3 900	2 200	180	2.25
6	11 800	6 000	7 900	4 000	5 800	2 900	225	2.25
7	18 200	7 900	12 100	5 300	8 800	3 800	225	2.25
8	27 300	10 800	18 200	7 200	12 800	5 100	450	4.5
9	36 400	13 500	24 300	9 000	17 100	6 300	450	4.5
10	48 200	16 600	32 300	11 200	22 800	7 900	450	4.5
Note: The quantities of water shown in columns 2, 4 and 6 are based on the average overall length of aeroplanes in a given category								

Table 1

except that for aerodrome categories 1 and 2, up to 100 % of the water may be substituted with complementary agent.

For the purpose of agent substitution, 1 kg of complementary agent is equivalent to 1 L of water for production of a foam meeting performance level A.

Note 1: The amounts of water specified for foam production are predicated on an application rate of 8.2 L/min/m2 for a foam meeting performance level A, 5.5 L/min/m2 for a foam meeting performance level B and 3.75 L/min/m2 for a foam meeting performance level C.

Note 2: When any other complementary agent id used, the substitution ratios need to be checked.

(da) the quantity of foam concentrates separately provided on vehicles for foam production is in proportion to the quantity of water provided and the foam concentrate selected;

(e) the amount of foam concentrate provided on a vehicle should be sufficient to produce, at least, two loads of foam solution;

(f) when a combination of different performance level foams are provided at the aerodrome, the total amount of water to be provided for foam production should be calculated for each foam type and the distribution of these quantities should be documented for each vehicle and applied to the overall rescue and firefighting requirement;

(g) the discharge rate of the foam solution is not less than the rates shown in Table 1;

(h) the complementary agents comply with the appropriate specifications of the International Organization for Standardization (ISO);

(i) the discharge rate of complementary agents is not less than the values shown in Table 1;

(ia) Dry chemical powders should only be substituted with an agent that has equivalent or better firefighting capabilities for all types of fires where complementary agent is expected to be used.

Note.- *Guidance on the use of complementary agents can be found in the Airport Services Manual (ICAO Doc 9137), Part 1.*

[According to Order no. 22/GEN from 02.06.2020]

(j) a reserve supply of foam concentrate equivalent to 200 % of the quantities identified in Table 1 is maintained on the aerodrome for vehicle replenishment purposes. Foam concentrate carried on fire vehicles in excess of the quantity identified in Table 1 can contribute to the reserve;

(k) a reserve supply of complementary agent equivalent to 100% of the quantity identified in Table 1 is maintained on the aerodrome for vehicle replenishment purposes and sufficient propellant gas is included to utilize this reserve complementary agent;

(l) for Category 1 and 2 aerodromes that have replaced up to 100% of the water with complementary agent a reserve supply of complementary agent of 200% is maintained;

(m) where a major delay in the replenishment of the supplies is anticipated, the amount of reserve supply is increased as determined by a risk assessment;

(n) a water need analysis is conducted to determine the availability of sufficient quantities of water for firefighting;

(o) quantities of water and foam concentrate are recalculated and the amount of water and foam concentrate for foam production and the discharge rates for foam solution are increased accordingly, where operations by aeroplanes larger than the average size in a given category are planned;

(oa) where the level of protection is reduced in accordance with AMC2 ADR.OPS.B.010 (a)(2), a recalculation of quantities of extinguishing agents should be computed based on the largest aeroplane in the reduced category;

(ob) for all-cargo, mail, training, test, positioning and end-of-life aeroplane operations, including those carrying dangerous goods, the recalculation of quantities of extinguishing agents should be based on the largest aeroplane in the category specified in Table 2 of AMC2 ADR.OPS.B.010(a)(2);and

(p) arrangements are in place to manage extinguishing agents in terms of selection, storage, maintenance, and testing.

AMC5 ADR.OPS.B.010(a)(2) Rescue and firefighting services

RESPONSE TIME

The aerodrome/airport operator should ensure that:

(a) rescue and firefighting service achieves a response time not exceeding three minutes with an operational objective of not exceeding two minutes from the time of the initial call to the rescue and firefighting services, to any point of each operational runway, in optimum visibility and surface conditions, and be in a position to apply foam at a rate of, at least, 50 % of the discharge rate specified in AMC4 ADR.OPS.B.010 Table 1;

(b) Response times should not exceed three minutes to any other part of the movement area, in optimum visibility and surface conditions.

Note 1.- *Response time is considered to be the time between the initial call to the rescue and firefighting service, and the time when the first responding vehicle(s) is (are) in position to apply foam at a rate of at least 50 per cent of the discharge rate specified in Table 9-2.*

Note 2.- *Optimum visibility and surface conditions are defined as daytime, good visibility, no precipitation with normal response route free of surface contamination, e.g. water, ice or snow.*

[According to Order no. 22/GEN from 02.06.2020]

(c) any vehicle, other than the first responding vehicle(s), required to achieve continuous agent application of the amount of extinguishing agents specified in Table 1 of AMC4 ADR.OPS.B.010 arrives no more than one minute after the first responding vehicle(s); and

(d) suitable guidance, equipment and/or procedures for rescue and firefighting services are provided, to meet the operational objective, as nearly as possible, in less than optimum conditions of visibility, especially during low visibility operations.

AMC6 ADR.OPS.B.010(a)(2) Rescue and firefighting services

PERSONNEL

The aerodrome/airport operator should ensure that:

(a) during flight operations and, at least, 15 minutes after the departure of last flight, sufficient trained personnel is detailed and readily available to ride the rescue and firefighting vehicles, and to operate the equipment at maximum capacity;

(b) personnel is deployed in a way that ensures the minimum response times can be achieved, and continuous agent application at the appropriate rate can be fully maintained considering also the use of hand lines, ladders, and other rescue and firefighting equipment normally associated with aircraft rescue and firefighting operations;

(c) all responding rescue and firefighting personnel are provided with protective clothing and respiratory equipment to enable them to perform their duties in an effective manner; and

(d) any other duties carried out by rescue and firefighting personnel do not compromise the response, or their safety.

GM1 ADR.OPS.B.010(a)(2) Rescue and firefighting services

COMMUNICATION AND ALERTING SYSTEMS

The aerodrome/airport operator should examine the possibility of utilizing means allowing the direct communication between the rescue and firefighting service and the flight crew of an aircraft in emergency. The decision could be based on the ability of the rescue and firefighting personnel to communicate effectively with the flight crew either verbally or using hand signals. Two-way radio communication system may be used as well as the hand signals described in Appendix 1 of the „Technical requirements. Rules of the air".

GM2 ADR.OPS.B.010(a)(2) Rescue and firefighting services

NUMBER OF RFFS PERSONNEL

In determining the number of personnel required to provide for rescue and firefighting, a Task and Resource Analysis should be performed, taking into consideration the types of aircraft operating at the aerodrome, the available rescue and firefighting vehicles and equipment, any other duties required from RFFS personnel, etc.

GM3 ADR.OPS.B.010(a)(2) Rescue and firefighting services

NUMBER OF RFFS VEHICLES AND RESCUE EQUIPMENT

Special firefighting equipment may not be provided for water areas; this does not prevent the provision of such equipment if it would be of practical use, such as when the areas concerned include reefs or islands. The objective should be to plan and deploy the necessary life-saving

flotation equipment, as expeditiously as possible, in a number commensurate with the largest aeroplane normally using the aerodrome.

GM4 ADR.OPS.B.010(a)(2) Rescue and firefighting services

REDUCTION OF RFFS LEVEL OF PROTECTION

Contingency arrangements to limit the need for changes to the promulgated rescue and firefighting level of protection should be developed. This may involve, for example, a maintenance plan to ensure the mechanical efficiency of equipment and vehicles for rescue and firefighting, and arrangements to cover unplanned absence of the minimum level of personnel including supervisory levels.

The following may be considered as unforeseen circumstances leading to temporary reduction of the level of protection of the aerodrome rescue and fire fighting:

(a) breakdown of RFFS vehicles;

(b) staff shortage;

(c) unavailability of extinguishing agents; and

(d) RFFS response to an accident.

Such changes, including estimated time of the reduction, should be notified without delay to the appropriate air traffic services (ATS) units and aeronautical information services (AIS) units (see GM1 ADR.OPS.A.005 Aerodrome data) to enable those units to provide the necessary information to arriving and departing aircraft. A temporary reduction should be expressed in terms of the new category of the rescue and firefighting services available at the aerodrome. Where the temporary reduction involves resources not used to calculate the aerodrome RFF category (e.g. specialist rescue equipment for difficult environs), details should be notified. When such a temporary reduction no longer applies, the above units should be advised accordingly.

GM5 ADR.OPS.B.010(a)(2) Rescue and firefighting services

RESCUE AND FIREFIGHTING LEVEL OF PROTECTION

The following examples are intended to illustrate the way in which the various factors to be taken into account when calculating levels of protection should be applied:

Example 1 — Wider aeroplane fuselage

If an aeroplane has a fuselage length of 47.5 m, column 2 of Table 1 in AMC2 ADR.OPS.B.010(a)(2) indicates RFF category 7. However, the example aeroplane has a fuselage width of 5.5 m, therefore, according to (a)(2) in AMC2 ADR.OPS.B.010(a)(2), the appropriate level of protection is RFF category 8.

Example 2 — Longer than average aeroplane length

Where operations by aeroplanes larger than the average size in a given category are planned, the quantities of water should be recalculated, and the amount of water for foam production as well as the discharge rates for foam solution should be increased accordingly. The example below is based on an aeroplane with an overall length of 48 m and a maximum fuselage width of 5 m. The quantity of water and the discharge rate of foam solution have been calculated using the ICAO critical-area concept, and increased to reflect the greater practical critical area.

Minimum useable amounts of extinguishing agents (based on the provision of foam meeting performance level B)			
Aerodrome category	**Water (lt)**	**Discharge rate of foam solution (lt/min)**	**Dry chemical powder(kg)**
Category 7 minimum requirement	12 100	5 300	225
Requirement following recalculation	14 113	6 163	225

Example 3 — Less than 700 movements in the busiest consecutive 3 months

The following examples illustrate the method for the determination of the aerodrome's rescue and firefighting level of protection when considering the number of movements:

Aeroplane	Overall length	Fuselage width	Category	Movements
Airbus A320	37.6 m	4.0 m	6	600
Bombardier CRJ 900	36.4 m	2.7 m	6	300
Embraer 190	36.2 m	3.0 m	6	500
ATR 72	27.2 m	2.8 m	5	200

The longest aeroplanes are categorized by evaluating, based on Table 1 of AMC2 ADR.OPS.B.010(a)(2), firstly their overall length and secondly their fuselage width until 700 movements are reached. It may be seen that the number of movements of the longest aeroplanes in the highest category totals more than 700. The aerodrome, in this case, is category 6.

Aeroplane	Overall length	Fuselage width	Category	Movements
Airbus A350-900	66.8 m	6.0 m	9	300
Boeing 747-8	76.3 m	6.5 m	10	400
Airbus A380	72.7 m	7.1 m	10	400

The longest aeroplanes are categorized by evaluating, based on Table 1 of AMC2 ADR.OPS.B.010(a)(2), firstly their overall length and secondly their fuselage width until 700 movements are reached. It may be seen that the number of movements of the longest aeroplanes in the highest category totals more than 700. It may also be noted that when evaluating the category appropriate to the overall length of Airbus A380, e.g. category 9, the category selected is actually one level higher as the aeroplane's fuselage width is greater than the maximum fuselage width for category 9. The aerodrome, in this case, is category 10.

Aeroplane	Overall length	Fuselage width	Category	Movements
Boeing 747-900ER	42.1 m	3.8 m	7	300
Bombardier CRJ 900	36.4 m	2.7 m	6	500
Airbus A319	33.8 m	4.0 m	6	300

The longest aeroplanes are categorized by evaluating, based on Table 1 of AMC2 ADR.OPS.B.010(a)(2), firstly their overall length and secondly their fuselage width until 700 movements are reached. It may be seen that the number of movements of the longest aeroplanes in the highest category totals only 300. The minimum category for the aerodrome, in this case, is be category 6, which is one category level below that of the longest aeroplane.

Aeroplane	Overall length	Fuselage width	Category	Movements
Airbus A380	73.0 m	7.1 m	10	300
Boeing 747-8	76.3 m	6.5 m	10	200
Boeing 747-400	70.7 m	6.5 m	9	300

The longest aeroplanes are categorized by evaluating, based on Table 1 of AMC2 ADR.OPS.B.010(a)(2), firstly their overall length and secondly their fuselage width until 700 movements are reached. It may be seen that the number of movements of the longest aeroplanes

in the highest category totals only 500. It may also be noted that when evaluating the category appropriate to the overall length of Airbus A380, e.g. category 9, the category selected is actually one level higher as the aeroplane's fuselage width is greater than the maximum fuselage width for category 9. The minimum category for the aerodrome, in this case, is category 9, which is one category level below that of the longest aeroplane.

Aeroplane	Overall length	Fuselage width	Category	Movements
Airbus A321	44.5 m	4.0 m	7	100
Boeing 747-900ER	42.1 m	3.8 m	7	300
ATR 42	22.7 m	2.9 m	4	500

The longest aeroplanes are categorized by evaluating, based on Table 1 of AMC2 ADR.OPS.B.010(a)(2), firstly their overall length and secondly their fuselage width until 700 movements are reached. It may be seen that the number of movements of the longest aeroplanes in the highest category totals only 400. The minimum category for the aerodrome is category 6. However, even if there is a relatively wide range of difference between the length of the longest aeroplane (Airbus A321) and the aeroplane for which the 700th movement is reached (ATR 42), the minimum category for the aerodrome may only be downgraded to category 6.

Example 4 — Anticipated periods of reduced activity

The level of protection should be no less than that needed for the highest category of aeroplanes planned to use the aerodrome during that period. If the aerodrome has promulgated RFFS category 7, but between 23:00 and 6:00, the largest aeroplane operating has an overall length of 27.5 m and a maximum fuselage width of 3.9 m, the promulgated category may be downgraded to category 5 for that time frame.

Example 5 — All-cargo and mail aeroplane operations including dangerous goods

An all-cargo aeroplane is an aeroplane operated for the transportation of cargo including dangerous goods. If an all-cargo aeroplane has an overall length of 47.5 m and a maximum fuselage width of 4.2 m, according to Table 1 of AMC2 ADR.OPS.B.010(a)(2), category 7 is indicated. As the aeroplane is an all-cargo one, according to Table 2 of AMC2 ADR.OPS.B.010(a)(2), a reclassification to category 6 may be applied.

GM6 ADR.OPS.B.010(a)(2) Rescue and firefighting services

CRITICAL AREA FOR CALCULATING QUANTITIES OF WATER

(a) The ICAO critical-area concept is applied for rescuing the occupants of an aeroplane. It seeks to control only that area of fire adjacent to the fuselage. The objective is to safeguard the integrity of the fuselage and maintain tolerable conditions for the occupants of the aeroplane. The size of the controlled area required to achieve this for a specific aeroplane has been determined by experimental means.

(b) There is a need to distinguish between the theoretical critical area, within which it may be necessary to control the fire, and the practical critical area, which is representative of actual aeroplane accident conditions. The theoretical critical area serves only as a means of categorizing aeroplanes in terms of the magnitude of the potential fire hazard in which they may become involved. It is not intended to represent the average maximum or minimum spill fire size associated with a particular aeroplane. The theoretical critical area is a rectangle having as one dimension the overall length of the aeroplane and as the other dimension a length which varies with the fuselage's length and width.

(c) From experiments performed, it has been established that for an aeroplane with a fuselage length equal to or greater than 24 m, in wind conditions of 16–19 km/h and at right angles to the fuselage, the theoretical critical area extends from the fuselage to a distance of 24 m upwind and 6 m downwind. For smaller aeroplanes, a distance of 6 m

on either side is adequate. To provide for a progressive increase in the theoretical critical area however, a transition is used when the fuselage length is between 12 and 24 m.

(d) The overall length of the aeroplane is considered appropriate for the theoretical critical area as the entire length of the aeroplane must be protected from burning. If not, the fire might burn through the skin and enter the fuselage. Moreover, other aeroplanes, such as T-tail ones, often have engines or exit points in their extended portion.

(e) The formula for the theoretical critical area A_T should be the following:

Overall length	Theoretical critical area A_T
$L < 12$ m	$L \times (12 + W)$
$12 \text{ m} \leq L < 18$ m	$L \times (14 + W)$
$18 \text{ m} \leq L < 24$ m	$L \times (17 + W)$
$L \geq 24$ m	$L \times (30 + W)$

where 'L' is the overall length of the aeroplane, and 'W' is the maximum width of the aeroplane fuselage.

(f) In practice, it is seldom that the entire theoretical critical area is subject to fire; thus, a smaller area for which it is proposed to have firefighting capacity is referred to as the practical critical area. As a result of a statistical analysis of actual aeroplane accidents, the practical critical area A_P has been found to be approximately two thirds of the theoretical critical area A_T, or

$A_P = 0.667 \times A_T$

(g) The quantity of water for foam production should be calculated with the following formula:

$Q = Q_1 + Q_2$, where:

— 'Q' is the total water required;

— 'Q_1' is the water used to control the fire in the practical critical area; and

— 'Q_2' is the water required after control of the fire has been established, and is needed for maintaining this control and/or extinguishing the remaining fire.

(h) The water required for control of the fire in the practical critical area (Q_1) may be expressed by the following formula:

$Q_1 = Ap \times R \times T$, where:

— 'Ap' is the practical critical area;

— 'R' is the rate of application; and

— 'T' is the time of application.

(i) The amount of water required for Q_2 may not be exactly calculated as it depends on a number of variables. The factors considered to be of primary importance are:

(1) the maximum gross mass of the aeroplane;

(2) the maximum passenger capacity of the aeroplane;

(3) the maximum fuel load of the aeroplane; and

(4) previous experience (analysis of aeroplane RFF operations).

These factors, when plotted on a graph, are used to calculate the total amount of water required for each airport category. The volume of water for Q_2, as a percentage of Q_1, varies from about 0 % for category 1 aerodromes to about 190 % for a category 10 aerodrome.

(j) The relation between Q_1 and Q_2 for aeroplanes representative of each airport category is shown in the following table:

Aerodrome category	Q_2 = percentage of Q_1
1	0 %
2	27 %
3	30 %
4	58 %
5	75 %
6	100 %
7	129 %
8	152 %
9	170 %
10	190 %

GM1 ADR.OPS.B.010(a)(3) Rescue and firefighting services

TRAINING OF RESCUE AND FIREFIGHTING PERSONNEL

The training of rescue and firefighting personnel may include training in, at least, the following areas:

(a) aerodrome familiarization;

(b) aircraft familiarization;

(c) rescue and firefighting personnel safety;

(d) emergency communications systems on the aerodrome, including aircraft fire-related alarms;

(e) use of the fire hoses, nozzles, turrets, and other appliances;

(f) application of the types of extinguishing agents required;

(g) emergency aircraft evacuation assistance;

(h) firefighting operations;

(i) adaptation and use of structural rescue and firefighting equipment for aircraft rescue and firefighting;

(j) dangerous goods;

(k) familiarization with fire fighters' duties under the aerodrome emergency plan;

(l) low visibility procedures;

(m) human performance, including team coordination;

(n) protective clothing and respiratory protection;

(o) composite materials; and

(p) recognition of aircraft ballistic parachute systems during emergency operations.

AMC1 ADR.OPS.B.010(a)(4) Rescue and firefighting services

MEDICAL STANDARDS FOR RFFS PERSONNEL

The aerodrome/airport operator should ensure that appropriate medical standards are met by RFFS personnel.

AMC1 ADR.OPS.B.010(b);(c) Rescue and firefighting services

TRAINING PROGRAMME OF RFFS PERSONNEL - GENERAL

The provisions of AMC1 ADR.OR.D.017 (a);(b) apply also for the training programme of RFFS personnel.

In addition, the aerodrome operator should ensure that:

(a) rescue and firefighting personnel actively participate in live fire drills commensurate with the types of aircraft, and type of rescue and firefighting equipment in use at the aerodrome, including pressure-fed fuel fire drills; and

(b) the rescue and firefighting personnel training programme includes training in human performance, including team coordination.

AMC2 ADR.OPS.B.010(b);(c) Rescue and firefighting services

TRAINING PROGRAMME OF RFFS PERSONNEL – CHECKING OF RFFS TRAINEES

Checking of RFFS trainees should be made in accordance with AMC2 ADR.OR.D.017 (a);(b)

AMC3 ADR.OPS.B.010(b);(c) Rescue and firefighting services

RULES AND PROCEDURES

(a) The aerodrome/airport operator should ensure that rescue and firefighting personnel are aware of the rules and procedures relevant to operation of the aerodrome and the relationship of their duties and responsibilities to the aerodrome operation as a whole.

(b) Proficiency checks should verify that rescue and firefighting personnel are aware of the rules and procedures relevant to their duties and responsibilities.

GM1 ADR.OPS.B.010(b);(c) Rescue and firefighting services

TRAINING PROGRAMME OF RFFS PERSONNEL – RECURRENT, REFRESHER AND DIFFERENCES TRAINING

The provisions of recurrent, refresher and differences training contained in GM1 ADR.OR.D.017 (a);(b) apply also for rescue and firefighting personnel.

GM2 ADR.OPS.B.010(b);(c) Rescue and firefighting services

TRAINING PROGRAMME OF RFFS PERSONNEL – CHECKING OF TRAINEES

The methods described in GM2 ADR.OR.D.017 (a);(b) apply also for rescue and firefighting trainees checking.

GM1 ADR.OPS.B.010(c) Rescue and firefighting services

PROFICIENCY CHECKS

(a) Proficiency checks should be conducted by nominated assessors in accordance with AMC1 ADR.OPS.B.010 (d).

(b) The maximum interval between two proficiency checks should not exceed 12 calendar months for rescue and firefighting personnel. The first proficiency check should be completed within the first year since the completion of the initial training programme.

(c) The proficiency check programme should include a validation process that measures the effectiveness of the programme.

(d) The proficiency check programme should identify checking responsibilities and relevant checking methods, including procedures to be applied in the event that personnel do not achieve the required standards.

(e) Information related to the proficiency check programme should be included in the aerodrome manual.

GM2 ADR.OPS.B.010(c) Rescue and firefighting services

PROFICIENCY CHECKS

The provisions contained in GM2 ADR.OR.D.017 (c) apply also for rescue and firefighting personnel.

AMC1 ADR.OPS.B.010(d) Rescue and firefighting services

INSTRUCTORS – ASSESSORS

The provisions contained in AMC1 ADR.OR.D.017 (d) for instructors and assessors apply also for rescue and firefighting personnel instructors and assessors.

AMC1 ADR.OPS.B.010(e) Rescue and firefighting services

RFFS PERSONNEL RECORDS

The provisions contained in AMC1 ADR.OR.D.017 (e) equally apply for RFFS personnel records.

GM1 ADR.OPS,B.010(e) Rescue and firefighting services

RFFS PERSONNEL – TRAINING RECORDS

The provisions contained in GM1 ADR.OR.D.017 (e) equally apply for RFFS personnel training records.

GM2 ADR.OPS.B.010(e) Rescue and firefighting services

RFFS PERSONNEL – PROFICIENCY CHECK RECORDS

The provisions contained in GM2 ADR.OR.D.017 (e) equally apply for RFFS personnel proficiency check records.

AMC1 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

GENERAL

(a) The aerodrome/airport operator should establish a monitoring and inspection program of the movement area which is commensurate with the traffic expected at the aerodrome in order to identify any default or potential hazards to the safety of aircraft or aerodrome operations.

(b) Inspections of the movement area covering items such as the presence of FOD, the status of visual aids, wildlife and current surface conditions, should be carried out each day, at least, once where the code number is 1 or 2, and, at least, twice where the code number is 3 or 4.

(c) Inspections covering other items such as other lighting systems required for the safety of aerodrome operations, pavements and adjacent ground surfaces, drainage and storm water collection systems, fencing and other access control devices, the movement area environment inside the aerodrome boundary and outside the aerodrome boundary within line of sight, should be carried out, at least, weekly.

(d) The aerodrome/airport operator, during excessive weather events (excessive heat, freeze and thaw periods, following a significant storm, etc.) should be conducting extra inspections of paved areas to check for pavement blow-ups and debris that could damage aircraft, or cause pilots to lose directional control.

(e) The aerodrome/airport operator should keep a log for all routine and non-routine inspections of the movement area and related facilities.

AMC2 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

PERSONNEL REQUIREMENTS FOR MOVEMENT AREA INSPECTIONS

(a) The aerodrome/airport operator should designate the personnel responsible for carrying out movement area inspections.

(b) The aerodrome/airport operator should ensure that all vehicles on the manoeuvring area are in radio contact with the appropriate Air Traffic Services either directly or through an escort.

(c) In order to prevent runway incursions, the aerodrome/airport operator should have procedures in place for conducting runway inspections, including direction of runway inspection, communication procedures, actions in case of communication failure or vehicle brake down, stop bars crossing, runway crossings, etc.

(d) The aerodrome/airport operator should ensure that personnel conducting movement area inspections receive training in, at least, the following areas:

(1) aerodrome familiarization, including aerodrome markings, signs, and lighting;

(2) Aerodrome Manual;

(3) Aerodrome Emergency Plan;

(4) Notice to Airmen (NOTAM) notification procedures;

(5) aerodrome driving rules;

(6) procedures of radiotelephony;

(7) aerodrome inspection procedures and techniques; and

(8) procedures for reporting inspection results and observations;

GM1 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

PAVEMENTS AND ADJACENT GROUND SURFACES INSPECTION

(a) Paved Areas Inspection

The following should be observed during an inspection of paved areas:

(1) general cleanliness with particular attention to material which could cause engine ingestion damage. This may include debris from runway maintenance operations, or excessive grit remaining after runway gritting;

(2) presence of contaminants such as snow, slush, ice, wet ice, wet snow on ice or frost, water, anti-icing or de-icing chemicals, mud, dust, sand, volcanic ash, oil, rubber deposits which may impair the runway surface friction characteristics; particular attention should be given to the simultaneous presence of snow, slush, ice, wet ice, wet snow on ice with anti-icing or de-icing chemicals;

(3) signs of damage to the pavement surface including cracking and spall of concrete, condition of joint sealing, cracking and looseness of aggregate in asphalt surfaces, or break-up of friction courses;

(4) after rain, flooded areas should be identified and marked, if possible, to facilitate later resurfacing;

(5) damage of light fittings;

(6) cleanliness of runway markings;

(7) the condition and fit of pit covers; and

(8) the extremities of the runway should be inspected for early touchdown marks; blast damage to approach lights, marker cones and threshold lights; cleanliness and obstacles in the runway end safety area.

(b) Adjacent ground surfaces inspection

The following may be observed during the inspection:

(1) the general state of ground cover vegetation ensuring, in particular, that excessive length is not obscuring lights, signs, markers, etc.;

(2) any developing depressions should be noted and plotted;

(3) any unreported aircraft wheel tracks should be carefully plotted and reported;

(4) the condition of signs and markers;

(5) the general bearing strength of grass areas, particularly those close to aircraft pavement surface;

(6) waterlogged grass areas; and

(7) FOD and wildlife.

GM2 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

VISUAL AIDS INSPECTION

(a) Flight checks of visual aids

Flight checks of approach and runway lighting systems should be carried out to ensure the pattern is correct and the lights are working, whenever a new system is commissioned, or after a major maintenance, and at least annually. The opportunity should also be taken to identify any confusing, or misleading lights in the aerodrome surroundings.

(b) Ground checks of visual aids

Photometric testing of runway lighting and approach lighting that is accessible with the equipment to be used, should be carried out in a targeted manner aimed at maintaining high levels of serviceability. The regularity of testing should be adjusted to achieve the target level of serviceability applicable to the service being tested.

GM3 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

OBSTACLES

(a) All authorized obstacles should be checked for proper lighting and marking.

(b) Any unauthorized obstacles should be reported to the designated persons or organizations immediately.

GM4 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

INSPECTION LOG

The inspection log should include:

(a) details of inspection intervals and times;

(b) names of persons carrying out the inspection; and

(c) results and observations, if any.

GM5 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

FOLLOW-UP OF INSPECTIONS

Arrangements should exist for reporting the results of inspections, and for taking prompt follow-up actions to ensure correction of unsafe conditions. These arrangements could include, depending on the result or observation, notification to air traffic services and aeronautical information services, removal of FODs, wildlife control, recording of events for further analysis according to the aerodrome operator's SMS requirements, etc.

GM6 ADR.OPS.B.015 Monitoring and inspection of movement area and related facilities

PERSONNEL REQUIREMENTS FOR MOVEMENT AREA INSPECTIONS

(a) Inspectors should use checklists covering the various inspection areas. A sketch of the aerodrome should accompany the checklist so that the location of problems can be marked for easy identification.

(b) Inspectors should review the most recently completed checklist from the previous inspection cycle prior to beginning the inspection.

(c) If construction or works are in progress, inspectors should be familiar with the safety plan of the construction or works.

AMC1 ADR.OPS.B.020 Wildlife strike hazard reduction

GENERAL

The aerodrome/airport operator should:

(a) participate in the national wildlife strike hazard reduction programme;

(b) establish procedures to record and report to the appropriate authority wildlife strikes to aircraft occurred at the aerodrome, in close cooperation with organizations operating, or providing services at the aerodrome;

(c) ensure that wildlife hazard assessments are made by competent personnel; and

(d) establish, implement and maintain a wildlife risk management programme.

GM1 ADR.OPS.B.020 Wildlife strike hazard reduction

WILDLIFE RISK ASSESSMENT

(a) The aerodrome/airport operator should:

(1) conduct a risk assessment using strike data for each species, as well as information on the presence of species, the number of individuals, and their biology, and update this regularly;

(2) take into account the number of strikes for each species and the severity of damage arising from those strikes; and

(3) target actions on those species which are present with the highest frequency and create the greatest damage.

(b) Wildlife risk assessments should be made by qualified personnel.

GM2 ADR.OPS.B.020 Wildlife strike hazard reduction

WILDLIFE RISK MANAGEMENT PROGRAMME

The wildlife risk management programme may cover an area of approximately 13 km (7 NM) from the aerodrome reference point, and should include, at least, the following elements:

(a) assignment of personnel:

(1) a person who is accountable for developing and implementing the wildlife risk programme;

(2) a person who oversees the daily wildlife control activities, and analyses the collected data and carries out risk assessments in order to develop and implement the wildlife risk management programme; and

(3) trained and qualified staff who detect and record the birds/wildlife, and assess the bird/wildlife hazard, and expel hazardous birds/wildlife;

(b) a process to report, collect, and record data of struck and living birds/wildlife;

(c) a process to analyze the data and to assess the bird/wildlife hazard to develop mitigation, proactive, and reactive measures. This should include a risk assessment methodology;

(d) a process of habitat and land management both on, and in its surroundings, whenever possible, in order to reduce the attractiveness of the area to birds/wildlife;

(e) a process to remove hazardous birds/wildlife;

(f) a process for liaison with non-aerodrome agencies and local landowners, etc. to ensure the aerodrome/airport operator is aware of developments that may contribute to creating additional bird hazards within the surrounding of the aerodrome's infrastructure, vegetation, land use and activities (for example crop harvesting, seed planting, ploughing, establishment of land or water features, hunting, etc. that might attract birds/wildlife).

GM3 ADR.OPS.B.020 Wildlife strike hazard reduction

TRAINING FOR WILDLIFE CONTROL

Note. *— Procedures on the management of wildlife hazards on and within the vicinity of aerodromes, including the establishment of a wildlife hazard management programme (WHMP), wildlife risk assessment, land-use management and personnel training, are specified in the PANS-Aerodromes (Doc 9981), Part II, Chapters 1 and 6. Further guidance is given in the Airport Services Manual (Doc 9137), Part 3.*

[According to Order no. 44/GEN from 21.10.2020]

(a) The aerodrome wildlife control personnel should receive formal training prior to their initial engagement as wildlife controllers.

(b) Training for aerodrome wildlife control should be documented and records of it should be retained to satisfy periodic reviews, audits, and competence checks;

(c) Training of aerodrome wildlife control personnel should be conducted by qualified aerodrome wildlife control personnel, or specialists with proven experience in this field.

(d) Wildlife control initial training should, at least, address the following general areas:

(1) an understanding of the nature and extent of the aviation wildlife management problem, and local hazard identification;

(2) an understanding of the national and local regulations, standards, and guidance material related to aerodrome wildlife management programs (use of best-practice models);

(3) appreciation of the local wildlife ecology and biology, including (where applicable) the importance of good airfield grass management policies, and the benefits they can deliver to wildlife control;

(4) the importance of accurate wildlife identification and observations, including the use of field guides;

(5) local and national laws and regulations relating to rare and endangered species, and species of special concern, and the aerodrome operators policies relating to them;

(6) wildlife strike remains collection, and identification policies and procedures;

(7) long-term (passive) control measures, including on and off aerodrome habitat management, including identification of wildlife attractions, vegetation policies, air navigation aids protection, and drainage system, and water body management practicalities;

(8) short-term (active) tactical measures, using well established effective wildlife removal, dispersal, and control techniques;

(9) documentation of wildlife activities and control measures, and reporting procedures (the aerodrome wildlife management plan);

(10) firearms and field safety, including the use of personal protective equipment; and

(11) wildlife strike risk assessment and risk management principles, and how these programs integrate with the aerodrome's safety management system.

(e) Wildlife control staff should be fully aware of the conditions and terms of the operations of the aerodrome environment. Where this is not relevant, the wildlife control personnel should receive appropriate training, including:

(1) aerodrome airside driver training, including aerodrome familiarization, air traffic control communications, signs and marking, navigational aids, aerodrome operations, and safety and other matters the aerodrome operator deems appropriate; and

(2) aircraft familiarization, including aircraft identification, aircraft engine design, and impact of wildlife strikes on aircraft systems.

(f) It should be ensured that wildlife control staff maintains competence in the role. This could be achieved either by regular refresher training. The maintenance of competence should include the areas in (d) and (e) above, and also include:

(1) reviewing firearms safety;

(2) changes in the local environment;

(3) changes in risk management policy;

(4) recent wildlife events at the aerodrome;

(5) improvements in active and passive measures; and

(6) any other matters the aerodrome/airport operator deems appropriate.

GM4 ADR.OPS.B.020 Wildlife strike hazard reduction

RECORDING AND REPORTING OF WILDLIFE STRIKES AND OBSERVED WILDLIFE

(a) It is necessary to maintain a record of all wildlife activity or 'bird/wildlife log'. The log should include, at least, the following information:

(1) numbers, species, and location of birds/wildlife seen; and

(2) actions taken to disperse birds/wildlife, and the results of these actions.

(b) The log should be completed at regular intervals by the wildlife control staff.

(c) The log should be analyzed to identify which species represent a hazard, at which times of day or year, or under which weather conditions, etc.

(d) The aerodrome/airport operator should have a system in place to collect bird/wildlife strike reports in close cooperation with data owners, like aircraft operators, air navigation service providers, aircraft engine maintenance departments, etc.

AMC1 ADR.OPS.B.025 Operation of vehicles

TRAINING PROGRAMME

(a) Depending upon the scale and complexity of the aerodrome and the individual requirements of the driver, the training programme should take into account the following main areas:

(1) a generic airside vehicle driver training programme which covers operational safety of operating vehicles and equipment in close proximity to aircraft on the movement area, such as runways, taxiways, aprons, stands, airside roads, and areas adjacent to the movement area;

(2) specific training on the vehicle or equipment, e.g. car, tug, high loader, coach;

(3) additional training on the hazards associated with runways and taxiways, and in the correct use of RTF and standard phraseology should be received by drivers required to operate on the manoeuvring area.

(b) An aerodrome/airport operator should establish a system for issuing movement area driving authorizations, and the conditions of their renewal.

AMC2 ADR.OPS.B.025 Operation of vehicles

MOVEMENT AREA DRIVING TRAINING

The training for driving on the movement area should include the following:

(a) the geography of the aerodrome;

(b) aerodrome signs, markings and lights; and

(c) radiotelephone operating procedures if the duties require to drive on the manoeuvring area;

(d) terms and phrases used in aerodrome control, including the ICAO spelling alphabet, if the duties require interaction with aerodrome control;

(e) rules of air traffic services as they relate to ground operations;

(f) aerodrome rules and procedures;

(g) low visibility procedures; and

(h) specialist functions as required, for example, in rescue and firefighting.

GM1 ADR.OPS.B.025 Operation of vehicles

GRANT, SUSPENSION OR REVOCATION OF AN AIRSIDE DRIVING AUTHORISATION

(a) The aerodrome/airport operator should grant an airside driving authorization to persons provided that:

(1) their tasks involve driving on the movement area;

(2) they hold a national driving license or any other driving license recognized by the Republic of Moldova;

(3) they hold a special national driving license if their duties involve the operation of a specialized vehicle;

(4) they meet the medical criteria according to the National Legislation;

(5) they hold a State Radiotelephony Operating License, or have a specific training on radiotelephony if their duties involve driving on the manoeuvring area;

(6) they have successfully completed an airside driving theoretical course, and passed the written exams;

(7) they have successfully demonstrated competency, as appropriate, in:

(i) the operation, or use of vehicle transmit/receive equipment;

(ii) understanding and complying with air traffic control and local procedures;

(iii) vehicle navigation on the aerodrome; and

(iv) special skills required for the particular function.

(b) The airside driving authorization should be valid for a limited period of time, and renewed thereafter, provided that the driver has successfully completed a refresher training course, and meets the requirements (a)(1)–(a)(4) above;

(c) The aerodrome/airport operator could suspend or revoke an airside driving authorization when the person:

(1) does not fulfil the requirements stated in (a)(1)–(a)(4);

(2) has repeatedly been reported to violate movement area driving rules; and

(3) has been proved to drive under the effect of alcohol or drugs.

(d) It is not necessary that all operators be trained at the same level. For example, operators whose functions are restricted to the apron. For the same reason, the aerodrome/airport operator could establish different types of driving authorizations, e.g. one class for driving at the apron, and another one for the manoeuvring area which may also have different validity periods.

GM2 ADR.OPS.B.025 Operation of vehicles

DEVELOPMENT OF A FRAMEWORK FOR A VEHICLE DRIVER TRAINING PROGRAMME

AIRSIDE VEHICLE DRIVER

The following elements could be considered when developing programs and knowledge requirements for an airside vehicle driver training programme:

(a) Airside driving permit (ADP)

(1) the issuing authority, the validity of the permit in terms of time, conditions of use, and its transferability;

(2) ownership of the permit and control, and audit of permit issue;

(3) local enforcement, and driving offence procedures; and

(4) relationship to national driver licensing system.

(b) National legislation and regulation

(1) government/State regulations related to general vehicle driving licenses; and

(2) local aerodrome requirements/guidance for driving airside.

(c) Aerodrome regulations and requirements

(1) rules of the air, and ATC procedures applicable to aerodromes as they relate to vehicles, particularly rights of way;

(2) specific aerodrome regulations, requirements, and local instructions;

(3) local methods used to disseminate general information, and instructions to drivers; and

(4) local methods used to disseminate information regarding works in progress.

(d) Personal responsibilities

(1) agreed national or aerodrome requirements concerning fitness to drive (medical and health standards);

(2) issue and use of personal protective equipment, such as high visibility clothing and hearing protection;

(3) general driving standards;

(4) no-smoking/no-drinking requirements airside;

(5) responsibilities with respect to foreign object debris and fuel/oil spillage; and

(6) the responsibility to ensure that a vehicle is suitable for the task, and is used correctly.

(e) Vehicle standards

(1) condition and maintenance standards agreed at the aerodrome, and/or national level;

(2) the requirement to display obstruction lights and company insignia and the board number, if it's applied;

(3) the requirement for, and content of, daily vehicle inspections;

(4) agreed standards of aerodrome and company vehicle fault reporting and rectification; and

(5) local requirements for the issue and display of airside vehicle permits.

(f) General aerodrome layout

(1) the general geography of the local aerodrome;

(2) aviation terminology used such as runway, taxiway, apron, roads, crossings, runway-holding points;

(3) all aerodrome signs, markings and lighting for vehicles and aircraft;

(4) specific reference to signs, markings and lighting used to guard runways, and critical areas; and

(5) specific reference to any controlled/uncontrolled taxiway crossing procedures.

(g) Hazards of general airside driving

(1) speed limits, prohibited areas, and no parking regulations;

(2) the danger zones around aircraft;

(3) engine suction/ingestion and blast, propellers, and helicopters;

(4) aircraft refuelling;

(5) foreign object debris and spillages;

(6) vehicle reversing;

(7) staff and passengers walking across aprons;

(8) air bridges and other services such as fixed electrical ground power;

(9) the general aircraft turnaround process;

(10) aircraft emergency stop and fuel cut-off procedures;

(11) hazardous cargo;
(12) local vehicle towing requirements;
(13) requirements for driving at night; and
(14) requirements for driving in adverse weather conditions, particularly low visibility.

(h) Local organizations
(1) the role of the aerodrome/airport operator in setting and maintaining standards;
(2) CAA and its responsibilities;
(3) the national and/or local police, and their involvement with airside driving; and
(4) other enforcement authorities dealing with vehicles, driving, health, and safety.

(i) Emergency procedures
(1) actions and responsibilities in a crisis situation (any accident or significant incident occurring on the aerodrome);
(2) action in the event of a vehicle accident;
(3) specific action in the event of a vehicle striking an aircraft;
(4) action in the event of fire;
(5) action in the event of an aircraft accident/incident; and
(6) action in the event of personal injury.

(j) Communications
(1) radio procedures and phraseologies to be used if applicable;
(2) light signals used by ATC;
(3) procedures to be used by vehicle drivers if lost or unsure of position;
(4) local emergency telephone numbers; and
(5) how to contact the local aerodrome safety unit.

(k) Practical training (visual familiarization)
(1) airside service roads, taxiway crossings, and any restrictions during low visibility;
(2) aprons and stands;
(3) surface paint markings for vehicles and aircraft;
(4) surface paint markings that delineate the boundary between aprons and taxiways and also used on intersection of taxiways;
(5) signs, markings and lighting used on the taxiway that indicate the runways ahead;
(6) parking areas and restrictions;
(7) speed limits and regulations; and
(8) hazards during aircraft turnarounds and aircraft movements.

MANOEUVRING AREA VEHICLE DRIVER

(a) All drivers expected to operate on the manoeuvring area of the aerodrome should obtain an ADP covering the programme above. Any driver expected to drive on the manoeuvring area should, also, obtain an agreed period of experience in general airside driving before training to operate on the manoeuvring area.

(b) All drivers should be trained initially and be provided with refresher training regularly, with particular additional emphasis on the following areas:
(1) Aerodrome regulations and requirements
(i) air traffic control rules, right of way of aircraft;

(ii) the definition of movement areas, manoeuvring areas, aprons, stands; and

(iii) methods used to disseminate information regarding works in progress.

(2) Air traffic control

(i) the aerodrome control function and area of responsibility;

(ii) the ground movement control function and area of responsibility;

(iii) normal and emergency procedures used by ATC relating to aircraft;

(iv) ATC frequencies used and normal handover/transfer points for vehicles;

(v) ATC call signs, vehicle call signs, phonetic alphabet, and standard phraseology; and

(vi) demarcation of responsibilities between ATC and apron control if applicable.

(3) Personal responsibilities

(i) fitness to drive with particular emphasis on eyesight and colour perception;

(ii) correct use of personal protective equipment;

(iii) responsibilities with respect to foreign object debris; and

(iv) responsibilities with respect to escorting other vehicles on the manoeuvring area.

(4) Vehicle standards

(i) responsibility for ensuring the vehicle used is fit for the purpose and task;

(ii) requirements for daily inspection prior to operating on the manoeuvring area;

(iii) particular attention to the display of obstruction and general lights; and

(iv) serviceability of all essential communications systems with ATC and base operations.

(5) Aerodrome layout

(i) particular emphasis on signs, markings and lighting used on the manoeuvring area;

(ii) special emphasis on signs, markings and lighting used to protect the runway;

(iii) description of equipment essential to air navigation such as instrument landing systems (ILS);

(iv) description of protected zones related to ILS antenna;

(v) description of ILS protected areas, and their relation to runway-holding points;

(vi) description of runway instrument/visual strip, cleared and graded area; and

(vii) description of lighting used on the manoeuvring area with particular emphasis on those related to low visibility operations.

(6) Hazards of manoeuvring area driving

(i) engine suction/ingestion and blast, vortex, propellers, and helicopter operations;

(ii) requirements for driving at night;

(iii) requirements for operations in low visibility and other adverse weather conditions;

(iv) procedures in the event of a vehicle or radio becoming unserviceable while on the manoeuvring area; and

(v) right of way of aircraft, towed aircraft, and rescue and firefighting vehicles in an emergency.

(7) Emergency procedures

(i) actions to be taken in the event of a vehicle accident/incident;

(ii) actions to be taken in the event of an aircraft accident/incident;

(iii) actions to be taken if foreign object debris or other debris is found on runways and taxiways;

(iv) procedures to be used by vehicle drivers if lost or unsure of their position; and

(v) local emergency telephone numbers.

(8) Aircraft familiarization

(i) knowledge of aircraft types and ability to identify all types normally operating at the aerodrome;

(ii) knowledge of airline call signs; and

(iii) knowledge of aircraft terminology relating to engines, fuselage, control surfaces, undercarriage, lights, vents, etc.

(9) Practical training (visual familiarization)

(i) all runways (including access and exit routes), holding areas, taxiways and aprons;

(ii) all signs, surface markings and lighting associated with runways, holding positions, CAT I, II, and III operations;

(iii) all signs, surface markings and lighting associated with taxiways;

(iv) specific markings that demarcate the boundary between aprons and manoeuvring areas;

(v) navigation aids such as ILS, protected area, antenna, RVR equipment, and other meteorological equipment;

(vi) hazards of operating around aircraft landing, taking off or taxiing; and

(vii) any locally used naming convention for particular areas or routes;

(viii) all service roads, which are on the manoeuvring area.

RADIOTELEPHONY

All drivers of vehicles operating on the manoeuvring area should be expected to display a high degree of competence with respect to the use of RTF phraseology and ICAO language requirements for air ground radiotelephony communications. Emphasis should be placed on the following areas:

(a) Hierarchy of message priority

Message priorities, an understanding of distress, alerting, control and information messages.

(b) Phonetic alphabet

Correct pronunciation of letters, words, and numbers.

(c) Standard phraseology

(1) emphasis on the need for drivers to use standard phraseology; and

(2) the need for caution with certain phrases such as ‘cleared’ and ‘go ahead’.

(d) Call signs for aircraft, ATC, and vehicles

(1) an understanding of terminology and acronyms used by ATC and pilots;

(2) knowledge of the airline call signs used at the aerodrome; and

(3) knowledge of vehicle call signs, and that they should be appropriate to their function (e.g. ‘Operations’, ‘Fire’, ‘Engineer’) and numbered when more than one vehicle is used (e.g. ‘Fire 2’).

(e) Read back procedures

The need for vehicle drivers to use standard readback, in the same manner as pilots, for instructions such as ‘enter/cross the runway’, and if conditional clearances are used.

(f) Readability scale

Understanding and use of the readability scale from 1 to 5.

(g) Lost or uncertain of position

Understanding of local procedures for vehicle drivers lost or uncertain of their position on the manoeuvring area.

(h) Vehicle breakdown

(1) local procedure for vehicle breakdown on runways and taxiways; and

(2) procedure for notifying ATC of vehicle failure.

(i) Radio failure

(1) understanding of the local procedure if radio failure occurs while on the runway or taxiway; and

(2) understanding of the light signals that can be used by ATC to pass instructions to vehicles.

(j) Transmitting techniques and use of RTF

(1) understanding the reasons for listening out prior to transmitting;

(2) use of standard phraseology and ICAO air-ground radiotelephony communications procedures;

(3) words and sounds to be avoided;

(4) correct positioning of microphones to avoid voice distortion;

(5) avoidance of ‘clipped’ transmissions;

(6) awareness of regional accents and variations of speech; and

(7) speed of delivery of RTF phraseology.

(k) Portable radios

(1) correct use of radios;

(2) effective range and battery life;

(3) screening/shielding effects on the aerodrome; and

(4) use of correct call signs, either related to a vehicle or a person.

(l) Safety while using radios

(1) local instructions regarding the use of portable radios and hand-held microphones while driving a vehicle; and

(2) local instructions on the use of mobile telephones while operating airside.

GENERAL CONSIDERATIONS

(a) All three training programmes should consist of two main parts, the first being the theoretical part which should include the use of prepared presentations, maps, diagrams, videos, booklets and checklists as appropriate. The second part should involve practical training and visual familiarization on the aerodrome with a suitably trained person. This practical tuition will take time depending upon the complexity of the aerodrome.

(b) Where the responsibility for vehicle driver training (apron and manoeuvring area) and RTF training is delegated to a third-party provider, the aerodrome management should institute a programme of audits, as part of its safety management system, to ensure that agreed standards are being maintained.

(c) The framework for a vehicle driver training programme outlined above is intended only as a guide, and is based on current 'good practice'. It is incumbent on aerodrome operators to regularly review their vehicle driver training programmes against programmes and documentation available across the industry.

AMC1 ADR.OPS.B.030 Surface movement guidance and control system

GENERAL

(a) A surface movement guidance and control system should take into account:

(1) the density of air traffic;

(2) the visibility conditions under which operations are intended;

(3) the need for pilot orientation;

(4) the complexity of the aerodrome layout; and

(5) movements of vehicles.

(b) The surface movement guidance and control system should be designed to assist in the prevention of inadvertent incursions of aircraft and vehicles onto an active runway;

(c) The system should be designed to assist in the prevention of collisions between aircraft, and between aircraft and vehicles or objects, on any part of the movement area.

(d) Where a surface movement guidance and control system is provided by selective switching of stop bars and taxiway centre line lights, the following requirements should be met:

(1) taxiway routes which are indicated by illuminated taxiway centre line lights should be capable of being terminated by an illuminated stop bar;

(2) the control circuits should be so arranged that when a stop bar located ahead of an aircraft is illuminated, the appropriate section of taxiway centre line lights beyond it is suppressed; and

(3) the taxiway centre line lights are activated ahead of an aircraft when the stop bar is suppressed.

(e) The aerodrome/airport operator should develop the surface movement guidance and control system (SMGCS) procedures in cooperation with the aerodrome air traffic services provider.

(f) The visual aid components of an SMGCS, i.e. markings, lights and signs, should be designed to conform with the relevant specifications in Chapters L, M and N of the „Certification specification (CS-ADR-DSN) to Regulation regarding administrative procedures related to aerodromes".

[According to Order no. 22/GEN from 02.06.2020]

GM1 ADR.OPS.B.030 Surface movement guidance and control system

GENERAL

(a) The SMGCS system should comprise an appropriate combination of visual aids, non-visual aids, procedures, control, regulation, management and information facilities. Systems range from the very simple at small aerodromes, with light traffic operating in good visibility conditions, to the complex systems necessary at large aerodromes with heavy traffic operating in low visibility conditions. The system selected for an aerodrome will be appropriate to the operational environment in which that aerodrome will operate.

(b) Surface movement radar for the manoeuvring area could be provided at an aerodrome intended for use in runway visual range conditions less than a value of 350 m.

(c) Surface movement radar for the manoeuvring area could be provided at an aerodrome other than that in (b) above when traffic density and operating conditions are such that regularity of traffic flow cannot be maintained by alternative procedures and facilities.

AMC1 ADR.OPS.B.035 Operations in winter conditions

GENERAL

(a) The aerodrome/airport operator should prepare, in collaboration with air traffic services provider and other relevant parties, procedures for winter maintenance (snow plan). The procedures should include requirements for inspections, criteria for snow-clearing, priorities for snow-clearing, criteria for preparation of operational surfaces, requirements for marking of snow-covered operational surfaces, and methods for assessing and reporting the surface conditions. The criteria specified in the winter maintenance procedures should be minimum criteria for maintaining safe aerodrome operations, including criteria for suspension of runway operation.

(b) The aerodrome/airport operator should ensure that snow, slush, ice, standing water, and other contaminants are removed from the surface of a paved runway, as rapidly and completely as possible, to minimize accumulation.

(c) The aerodrome/airport operator should, as adequate, avoid harmful effects on environment, aircraft or pavements when using chemicals to remove snow, slush, ice, and other contaminants from operational surfaces.

(d) Chemicals to remove or to prevent the formation of ice and frost on aerodrome pavements should be used when conditions indicate their use could be effective. Caution should be exercised in the application of the chemicals so as not to create a more slippery condition.

[According to Order no. 22/GEN from 02.06.2020]

Note.- *Guidance on the use of chemicals for aerodrome pavements is given in the Airport Services Manual (ICAO Doc 9137), Part 2.*

Applicable until 3 November 2021 [According to Order no. 44/GEN from 21.10.2020].

Note.- *Information on the use of chemicals for aerodrome pavements is given in the PANS Aerodromes (ICAO Doc 9981).*

Applicable from 4 November 2021 [According to Order no. 44/GEN from 21.10.2020].

GM1 ADR.OPS.B.035 Operations in winter conditions

AERODROME SNOW PLAN

(a) The aerodrome snow plan should be published and made available to all concerned in snow clearance.

(b) Details of the equipment available at the aerodrome should be published in the Aeronautical Information Publication (AIP) Moldova.

(c) The aerodrome snow plan should include the following:

(1) the Snow Committee members and the person in charge of the snow clearance operation, with a chain of command giving a breakdown in duties;

(2) methods of communication between aerodrome operations, air traffic control, and the Meteorological Office;

(3) the equipment available for snow clearance. This should include equipment for ploughing, sweeping, and blowing snow;

(4) priority of surfaces to be cleared, and clearance limits for aircraft using the aerodrome;

(5) collection of information for SNOWTAM and dissemination of this information;

(6) designated snow dumping or melting areas to avoid confusion during the actual clearance operations;

(7) an alerting system in order that sufficient warning is given to all bodies concerned;

(8) the manpower available, including staff for equipment maintenance arrangements for shifts, and call out procedures;

(9) deployment of equipment and tactical approaches to be used;

(10) general principles to be followed in deciding when to close runways for snow clearance and designation of management personnel authorized to make the decision;

(11) methods of assessing and reporting the surface conditions; and

(12) criteria for the suspension of runway operations.

AMC1 ADR.OPS.B.040 Night Operations

GENERAL

The aerodrome/airport operator for aerodromes operated at night should, in collaboration with air traffic services provider, ensure that visual aids are installed, operated, and maintained to permit aircraft operations to be performed safely.

AMC1 ADR.OPS.B.045 Low Visibility Operations

GENERAL

(a) The aerodrome/airport operator should, in collaboration with air traffic services provider and the provider of apron management services, if applicable, establish procedures for low visibility operations when lower than Standard Category I, other than Standard Category II, Category II and III approaches and low visibility take-offs are conducted.

(b) When low visibility procedures (LVP) are in effect, the aerodrome/airport operator should make available to aeronautical information services and/or air traffic services, as appropriate, information on the status of the aerodrome facilities.

(c) The aerodrome/airport operator should establish and implement procedures to ensure that when low visibility procedures (LVP) are in effect, persons and vehicles operating on an apron are restricted to the essential minimum.

(d) The procedures to be established by the aerodrome/airport operator to ensure safe aerodrome operations during low visibility conditions should cover the following subjects:

(1) physical characteristics of the runway environment, including pre-threshold, approach and departure areas;

(2) obstacle limitation surfaces;

(3) surveillance and maintenance of visual aids;

(4) safeguarding of non-visual aids essential to low visibility procedures;

(5) secondary power supplies;

(6) movement area safety;

(7) RFFS.

AMC1 ADR.OPS.B.050 Operations in adverse weather conditions

PROCEDURES

The aerodrome/airport operator should, together with the air traffic services and other relevant parties operating at the aerodrome, establish and implement procedures required to mitigate the risk of operation of the aerodrome under adverse weather conditions such as strong winds, heavy rain, and thunderstorms, including the suspension of operations on the runway(s) if deemed necessary.

AMC1 ADR.OPS.B.055 Fuel quality

GENERAL

The aerodrome/airport operator should verify, either by itself or through arrangements with third parties, that organizations involved in storing and dispensing of fuel to aircraft, implement procedures to:

(a) maintain the installations and equipment for storing and dispensing the fuel in such condition so as not to render unfit for use in aircraft;

(b) mark such installations and equipment in a manner appropriate to the grade of the fuel;

(c) take fuel samples at appropriate stages during the storing and dispensing of fuel to aircraft, and maintain records of such samples; and

(d) use adequately qualified and trained staff in storing, dispensing, and otherwise handling fuel on the aerodrome.

GM1 ADR.OPS.B.055 Fuel quality

COMPLIANCE

The aerodrome/airport operator, in order to ensure compliance, could use:

(a) audit reports to organizations involved in storing and dispensing of fuel to aircraft, or

(b) relevant national procedures providing for the assurance of fuel quality.

AMC1 ADR.OPS.B.065 Visual Aids and Aerodrome Electrical Systems

GENERAL

(a) The aerodrome/airport operator should establish a monitoring system of aerodrome ground lights so as to inform the air traffic services provider when safe operation is no longer possible.

(b) The aerodrome/airport operator should establish procedures for the operation of visual aids.

(c) The aerodrome/airport operator should establish procedures for the provision and removal of temporary markings, lights and signs.

AMC1 ADR.OPS.B.070 Aerodrome works safety

GENERAL

(a) The procedures should be appropriate to the volume and nature of operations at the aerodrome.

(b) Construction or maintenance work on the movement area, or work affecting aerodrome operations should be planned, established, implemented, or approved by the aerodrome/airport operator.

(c) The scope of work, physical extent, and time period should be notified to concerned relevant parties. If such work will render limitations to the use of a particular runway, additional measures should be implemented to ensure safety.

(d) Roles and responsibilities for operations and tasks associated with the reduction of runway length available and the work in progress (WIP) are clearly understood and complied with.

(e) The aerodrome/airport operator should put in place appropriate measures to monitor the safety of the aerodrome and aircraft operations during aerodrome works such that timely corrective action is taken when necessary to assure continued safe operations.

(f) The aerodrome/airport operator should ensure the works site is returned to operational use in a safe and timely manner by ensuring:

(1) the works site is cleared of personnel, vehicles, and plant in a safe and timely manner;

(2) The works-affected area is inspected for operational serviceability in accordance with the hand-back procedures; and

(3) relevant authorities or organizations are notified of the restoration of aerodrome serviceability in accordance with procedures, using suitable means of communication.

AMC2 ADR.OPS.B.070 Aerodrome works safety

RUNWAY PAVEMENT OVERLAYS

The aerodrome/airport operator should ensure that:

(a) when a runway is to be returned temporarily to an operational status before resurfacing is complete, the longitudinal slope of the temporary ramp, measured with reference to the existing runway surface or previous overlay course, should be:

(1) 0.5 to 1.0 % for overlays up to and including 5 cm in thickness; and

(2) not more than 0.5 % for overlays more than 5 cm in thickness.

(b) Before a runway being overlaid is returned to a temporary operational status, a runway centre line marking, conforming to the applicable specifications included in the aerodrome certification basis of the aerodrome, should be provided.

(c) The location of any temporary threshold should be identified by a 3.6 m wide transverse stripe.

(d) Overlaying should proceed from one end of the runway toward the other end so that based on runway utilization most aircraft operations will experience a down ramp.

[According to Order no. 22/GEN from 02.06.2020]

(e) The entire width of the runway should be overlaid during each work session.
[According to Order no. 22/GEN from 02.06.2020]

(f) The overlay should be constructed and maintained above the minimum friction level specified in CS ADR-DSN.B.090 (ba) of the „Certification specification (CS-ADR-DSN) to Regulation regarding administrative procedures related to aerodromes”.
[According to Order no. 22/GEN from 02.06.2020]

AMC3 ADR.OPS.B.070 Aerodrome works safety

MARKING AND LIGHTING OF UNSERVICEABLE AREAS

(a) The aerodrome/airport operator should ensure that:

(1) unserviceability markers are displayed whenever any portion of a taxiway, apron, or holding bay is unfit for the movement of aircraft but it is still possible for aircraft to bypass the area safely;

(2) on a movement area used at night, unserviceability lights should be used; and

(3) Unserviceability markers and lights are placed at intervals sufficiently close so as to delineate the unserviceable area.

(b) Unserviceability markers should consist of conspicuous upstanding devices such as flags, cones, or marker boards.

(c) Unserviceability markers and lights should meet the specifications described in CS ADR.DSN.R.870.

AMC4 ADR.OPS.B.070 Aerodrome works safety

CLOSED RUNWAYS AND TAXIWAYS, OR PARTS THEREOF

The aerodrome/airport operator should ensure that:

(a) a closed marking as defined in CS ADR.DSN.R.855(c) is displayed on a temporarily closed runway, or taxiway, or a portion thereof, except that such a marking may be omitted when the closing is of short duration and adequate warning by air traffic services is provided;

(b) lighting on a closed runway or taxiway, or a portion thereof is not operated, except as required for maintenance purposes; and

(c) in addition to closed markings, when the runway, taxiway, or portion thereof is closed and is intercepted by a usable runway or taxiway which is used at night, unserviceability lights as defined in CS ADR.DSN.R.870(c) should be placed across the entrance to the closed area at intervals not exceeding 3 m.

GM1 ADR.OPS.B.070 Aerodrome works safety

MAINTENANCE WORKS

(a) Persons or sections entering the movement area to perform maintenance should have a written approval by the aerodrome operator.

(b) Entrance to the movement area should be subject to clearance by the unit responsible for that area (ATC, apron management, aerodrome operator, etc.) using appropriate means (R/T, telephone, etc.).

(c) Individuals carrying out maintenance works should comply with local rules concerning the control and operation of vehicles in the movement area.

GM2 ADR.OPS.B.070 Aerodrome works safety

MINOR CONSTRUCTION/MAINTENANCE WORK

(a) A system of work permits should be established for minor works on the movement area.

(b) The objectives of the work permits should be such that:

(1) no work is taking place on the movement area without the knowledge of aerodrome/airport operator's staff and air traffic services;

(2) permitted times of work are strictly followed; and

(3) all individuals taking part in the work are briefed in detail on the following:

(i) precise areas in which work may be done;

(ii) the routes to be followed to and from the working area;

(iii) the R/T procedures to be used;

(iv) the safety precautions to be observed, the maintenance of a listening watch and the use of look-outs; and

(v) the reporting procedure to be followed on completion of work.

(c) At the conclusion of work, aerodrome/airport operator's staff, or other appropriate staff, should inspect the working area to ensure that it has been left in a satisfactory condition.

GM3 ADR.OPS.B.070 Aerodrome works safety

MAJOR CONSTRUCTION/MAINTENANCE WORK

(a) Before the commencement of any substantial work on the movement area, a liaison group comprising representatives from the aerodrome/airport operator, air traffic services, apron management services, if applicable, and subcontractors' agents should be established.

(b) The group could meet, as often as considered necessary, to review progress, and consider the need for any change in working practices to meet operational requirements.

(c) As far as practicable, working areas should be blocked off from the active parts of the movement area by the erection of physical barriers.

(d) Consideration should be given to the marking and lighting of barriers.

(e) The lights of taxiways leading into working areas should be permanently 'off'.

(f) Before works commence, the following should be established:

(1) the hours of work;

(2) the authorized routes;

(3) the communications facilities to be used;

(4) the permitted heights of vehicles and equipment, and the limitations to be placed on operating heights of cranes; and

(5) any limitation to be placed on use of electrical equipment which might cause interference with navigational facilities or aircraft communications.

(g) Contractors should be briefed for possible hazards to personnel working on aerodromes, in particular the jet blast problem and noise.

(h) Where contractors work on or traverse aircraft pavement areas, these areas should be inspected thoroughly before they are opened again for aircraft use, with particular attention to the presence of debris and the general cleanliness of the surface.

(i) Where aircraft are constantly using areas open to contractors, inspections at frequent intervals are required to ensure the continuing operational safety of the aerodrome.

(j) Adequate marking arrangements should be provided for crane jibs when extra conspicuity is considered desirable.

(k) If work is of prolonged duration, a constant watch is required to ensure that the marking and lighting of obstacles and unserviceable areas does not degrade below acceptable limits.

(l) The effect of tall cranes on ILS and radar, in conjunction with those responsible for electronic landing aids and steps taken to reduce limitations to the minimum, should be considered.

GM4 ADR.OPS.B.070 Aerodromes works safety

USE OF UNSERVICEABILITY LIGHTS

When lights are used to mark temporary unserviceable areas at night or during reduced visibility conditions, these lights mark the most potentially dangerous extremities of the area. A minimum of four such lights could be used, except where the area is triangular in shape where a minimum of three lights may be employed. The number of lights may be increased when the area is large or of unusual configuration. At least one light should be installed for each 7.5 m of peripheral distance of the area. If the lights are directional, they should be orientated so that, as far as possible, their beams are aligned in the direction from which aircraft or vehicles will approach. Where aircraft or vehicles will normally approach from several directions, consideration should be given to adding extra lights or using omnidirectional lights to show the area from these directions. Unserviceable area lights should be frangible. Their height should be sufficiently low to preserve clearance for propellers and for engine pods of jet aircraft.

GM5 ADR.OPS.B.070 Aerodrome works safety

USE OF TEMPORARY RUNWAY MARKINGS

(a) Circumstances may occur when it is not practicable to install permanent markings, for example during runway resurfacing. In order to provide sufficient visual guidance to aircraft, the following markings should be considered:

(1) runway centre line;

(2) taxiway centre line lead on/off;

(3) runway edge line;

(4) runway threshold; and

(5) touchdown zone and aiming point markings.

(b) Centre line and edge marking widths can be replaced by temporary markings of reduced width from 0.9 m to 0.6 m, if required.

(c) Touchdown zone and aiming point markings should be painted as soon as possible after the resurface of the runway.

(d) Threshold markings should be painted as soon as possible, using temporary materials before making them permanent.

AMC1 ADR.OPS.B.075 Safeguarding of aerodromes

GENERAL

(a) The aerodrome/airport operator should have procedures to monitor the changes in the obstacle environment, marking and lighting, and in human activities or land use on the aerodrome and the areas around the aerodrome. The scope, limits, tasks and responsibilities for the monitoring should be defined in coordination with the relevant air traffic services providers, and other relevant authorities.

(b) The limits of the aerodrome surroundings that should be monitored by the aerodrome/airport operator are defined in coordination with the CAA and should include the areas that can be visually monitored during the inspections of the manoeuvring area.

(c) The aerodrome/airport operator should have procedures to mitigate the risks associated with changes on the aerodrome and its surroundings identified with the monitoring procedures. The scope, limits, tasks, and responsibilities for the mitigation of risks associated to obstacles or hazards outside the perimeter fence of the aerodrome should be defined in coordination with the relevant air traffic services providers, with the CAA and other relevant authorities.

(d) The risks caused by human activities and land use which should be assessed and mitigated should include:

(1) obstacles and the possibility of induced turbulence;

(2) the use of hazardous, confusing, and misleading lights;

(3) the dazzling caused by large and highly reflective surfaces;

(4) sources of non-visible radiation, or the presence of moving, or fixed objects which may interfere with, or adversely affect, the performance of aeronautical communications, navigation and surveillance systems; and

(5) non-aeronautical ground light near an aerodrome which may endanger the safety of aircraft and which should be extinguished, screened, or otherwise modified so as to eliminate the source of danger.

GM1 ADR.OPS.B.075(a)(1) Safeguarding of aerodromes

OTHER SURFACES

Other surfaces associated with the aerodrome are surfaces that need to be established when operating in accordance with ICAO PANS-OPS Doc 8168 (Procedures for Air Navigation Services - Aircraft Operations), Volume II, as adopted into the national law. The term 'surfaces' in this meaning is not used uniformly in different sources of information where also terms 'area' or 'zone' may be used.

GM2 ADR.OPS.B.075(a)(1) Safeguarding of aerodromes

OTHER AREAS TO BE MONITORED AND PROTECTED

Aeronautical communications, navigation and surveillance systems should be established and protected in accordance with the requirements of ICAO Annex 10.

AMC1 ADR.OPS.B.080 Marking and lighting of vehicles and other mobile objects

GENERAL

(a) The aerodrome operator should ensure that all vehicles operating on the manoeuvring area are marked by colours or display flags.

(b) When mobile objects are marked by colour, conspicuous colours should be used.

(c) When flags are used to mark mobile objects, they should be displayed around, on top of, or around the highest edge of the object. Flags should not increase the hazard presented by the object they mark.

(d) When flags are used to mark mobile objects they should not be less than 0.9 m on each side and should consist of a chequered pattern, each square having sides of not less than 0.3 m. The colours of the pattern should contrast each with the other and with the background against which they will be seen. Orange and white, or alternatively red and white should be used, except where such colours merge with the background.

(e) Low-intensity obstacle lights, Type C, should be displayed on vehicles and other self-powered mobile objects excluding aircraft.

(f) Low-intensity obstacle lights, Type D, should be displayed on follow-me vehicles.

GM1 ADR.OPS.B.080 Marking and lighting of vehicles and other mobile objects

COLOURS TO BE USED

Red or yellowish green colour should preferably be used for marking emergency vehicles and yellow colour for service vehicles

AMC1 ADR.OPS.B.090 Use of the aerodrome by higher code letter aircraft

ELEMENTS TO BE ASSESSED

When assessing the possibility of operation of aircraft whose code letter is higher than the code letter of the aerodrome reference code, the aerodrome/airport operator should, amongst other issues, assess the impact of the characteristics of the aircraft on the aerodrome, its facilities, equipment and its operation, and vice versa.

Aircraft characteristics to be assessed include, but are not limited to:

(a) fuselage length;
(b) fuselage width;
(c) fuselage height;
(d) tail height;
(e) wingspan;
(f) wing tip vertical clearance;

(g) cockpit view;
(h) distance from the pilot's eye position to the nose landing gear and to the main landing gear;
(i) outer main gear wheel span;
(j) wheelbase;
(k) main gear steering system;
(l) landing gear geometry;
(m) engine data;
(n) flight performance; and
(o) technology evolution.

GM1 ADR.OPS.B.090 Use of the aerodrome by higher code letter aircraft

ELEMENTS TO BE ASSESSED

Further guidance on this issue is contained in ICAO Circular 305-AN/177 and ICAO Circular 301-AN/174.

In any case, the elements that have to be taken into account for the safety assessment are, without prejudice to other assessments that may have to be conducted, in accordance with other applicable requirements contained in ADR.OPS.

Such assessments should include, but are not limited to:

(a) the aircraft mass, tire pressure and ACN values — with regard to overload operations; and
(b) maximum passenger and fuel carrying capacity — with regard to level of RFFS protection to be provided and the aerodrome emergency planning.

SUBPART C — AERODROME MAINTENANCE

AMC1 ADR.OPS.C.005 General

MAINTENANCE PROGRAMME

The aerodrome/airport operator should ensure that a maintenance programme is established and implemented, including preventive maintenance where appropriate, to maintain aerodrome facilities in a condition which does not impair the safety of aeronautical operations. The scope of the maintenance programme should include, but may not be limited to, the following items:

(a) visual aids and other lighting systems required for the safety of aerodrome operations;
(b) power supply and other electrical systems;
(c) pavements, other ground surfaces, and drainage systems;
(d) fencing and other access control devices;
(e) equipment and vehicles, including those used by rescue and firefighting services, which are necessary for the safety of aerodrome operations; and
(f) buildings which are necessary for the safety of aerodrome operations.

GM1 ADR.OPS.C.005 General

HUMAN FACTORS

Note 1. *— Guidance material on Human Factors principles can be found in the Human Factors Training Manual (Doc 9683) and in the Airport Services Manual (Doc 9137), Part 8 — Airport Operational Services.*

Note 2. *— General principles and procedures on the training of aerodrome personnel, including training programmes and competence checks, are specified in the PANS-Aerodromes (Doc 9981).*

[According to Order no. 44/GEN from 21.10.2020]

The design and application of the maintenance programme should observe human factors principles.

AMC1 ADR.OPS.C.010 Pavements, other ground surfaces, and drainage

GENERAL

(a) The aerodrome/airport operator should maintain the surface of a paved runway in a condition so as to provide good friction characteristics and low rolling resistance. Mud, dust, sand, oil, rubber deposits, and other pollutants should be removed, as rapidly and completely as possible, to minimize accumulation.
(b) Taxiways and aprons should be kept clear of pollutants to the extent necessary to enable aircraft to be taxied to and from an operational runway.
(c) Drainage systems and storm water collection systems should be periodically checked and, if necessary cleaned or maintained, to ensure efficient water run-off.
(d) The aerodrome/airport operator should measure the runway surface friction characteristics for maintenance purpose with a continuous friction measuring device using self-wetting features. The frequency of these measurements should be sufficient to determine the trend of the surface friction characteristics of the runway.
(e) The aerodrome/airport operator should take corrective maintenance action to prevent the runway surface friction characteristics for either the entire runway, or a portion thereof from falling below the minimum friction level specified by the State.
(f) When the friction of a significant portion of a runway is found to be below the minimum friction level value, the aerodrome/airport operator should report such information in order to promulgate it in a NOTAM specifying which portion of the runway is below the minimum friction level and its location on the runway, and take immediate corrective action.
(g) The surface of a paved runway should be evaluated when constructed or resurfaced to determine that the surface friction characteristics achieve the design objectives.

GM1 ADR.OPS.C.010(b)(3) Pavements, other ground surfaces and drainage

DETERMINATION OF FRICTION CHARACTERISTICS OF WET PAVED SURFACES

(a) The surface friction characteristics of a paved runway should be:

(1) assessed to verify the surface friction characteristics of new or resurfaced paved runways; and

(2) assessed periodically in order to determine the slipperiness of paved runways;

(b) The condition of a runway pavement is generally assessed under dry conditions using a self-wetting continuous friction measuring device. Evaluation tests of runway surface friction characteristics are made on clean surfaces of the runway when first constructed or after resurfacing.

(c) Friction tests of existing surface conditions are taken periodically in order to avoid falling below the minimum friction level specified by the CAA. When the friction of any portion of a runway is found to be below this value, then such information should be promulgated in a NOTAM, specifying which portion of the runway is below the minimum friction level and its location on the runway. A corrective maintenance action must be initiated without delay. Friction measurements should be taken at time intervals that will ensure identification of runways in need of maintenance or special surface treatment before their condition becomes serious. The time intervals and mean frequency of measurements depend on factors such as: aircraft type and frequency of usage, climatic conditions, pavement type, and pavement service and maintenance requirements.

(d) Friction measurements of existing, new, or resurfaced runways should be made with a continuous friction measuring device provided with a smooth tread tire. The device should use self-wetting features to allow measurements of the friction characteristics to be made at a water depth of 1 mm.

(e) When it is suspected that the surface friction characteristics of a runway may be reduced because of poor drainage, owing to inadequate slopes or depressions, then an additional measurement should be made, but this time under natural conditions representative of a local rain. This measurement differs from the previous one in that water depths in the poorly cleared areas are normally greater in a local rain condition. The measurement results are, thus, more apt to identify problem areas having low friction values that could induce aquaplaning than the previous test. If circumstances do not permit measurements to be conducted during natural conditions representative of a rain, then this condition may be simulated.

(f) When conducting friction tests using a self-wetting continuous friction measuring device, it is important to note that, unlike compacted snow and ice conditions, in which there is very limited variation of the friction coefficient with speed, a wet runway produces a drop in friction with an increase in speed. However, as the speed increases, the rate at which the friction is reduced becomes less. Among the factors affecting the friction coefficient between the tire and the runway surface, texture is particularly important. If the runway has a good macro-texture allowing the water to escape beneath the tire, then the friction value will be less affected by speed. Conversely, a low macro-texture surface will produce a larger drop in friction with increase in speed.

(g) The design objective for new runway surfaces and maintenance planning, and minimum friction levels for runway surface in use, should be according to the following table:

	Test tire						
Test equipment	Type	Pressure (kPa)	Test speed (km/h)	Test water depth (mm)	Design objective for new surface	Maintenance planning level	Minimum friction level
Mu-meter	A	70	65	1.0	0.72	0.52	0.42
Trailer	A	70	95	1.0	0.66	0.38	0.26
Skiddometer	B	210	65	1.0	0.82	0.60	0.50
Trailer	B	210	95	1.0	0.74	0.47	0.34
Surface Friction Tester Vehicle	B	210	65	1.0	0.82	0.60	0.50
	B	210	95	1.0	0.74	0.47	0.34
Runway Friction Tester Vehicle	B	210	65	1.0	0.82	0.60	0.50
	B	210	95	1.0	0.74	0.54	0.41
TATRA Friction Tester Vehicle	B	210	65	1.0	0.76	0.57	0.48
	B	210	95	1.0	0.67	0.52	0.42
Grip Tester	B	140	65	1.0	0.74	0.53	0.43
Trailer	B	140	95	1.0	0.64	0.36	0.24

Table 1

(h) Other friction measuring devices can be used, provided they have been correlated with, at least, one test equipment mentioned in the table above.

(i) Personnel measuring runway surface friction required in (f), (g), (h) and Table 1 shall be trained to fulfil their duties.

Applicable from 4 November 2021 [According to Order no. 44/GEN from 21.10.2020].

(j) The runway surface should be visually assessed, as necessary, under natural or simulated rain conditions for ponding or poor drainage and where required, corrective maintenance action taken.

Applicable from 4 November 2021 [According to Order no. 44/GEN from 21.10.2020].

(k) When a taxiway is used by turbine-engined aeroplanes, the surface of the taxiway shoulders should be maintained so as to be free of any loose stones or other objects that could be ingested by the aeroplane engines.

Note.- *Guidance on this subject is given in the Aerodrome Design Manual (ICAO Doc 9157), Part 2.*

[According to Order no. 22/GEN from 02.06.2020]

GM2 ADR.OPS.C.010(b)(1) Pavements, other ground surfaces, and drainage

OVERLOAD OPERATIONS

Note. - *Applicable until 27 November 2024*

[According to Order no. 44/GEN from 21.10.2020]

(a) Overloading of pavements can result either from loads too large, or from a substantially increased application rate, or both. Loads larger than the defined (design or evaluation) load shorten the design life, whilst smaller loads extend it. With the exception of massive overloading, pavements in their structural behaviour are not subject to a particular

limiting load above which they suddenly or catastrophically fail. Behaviour is such that a pavement can sustain a definable load for an expected number of repetitions during its design life. As a result, occasional minor overloading is acceptable, when expedient, with only limited loss in pavement life expectancy, and relatively small acceleration of pavement deterioration. For those operations in which magnitude of overload and/or the frequency of use do not justify a detailed analysis, the following criteria are suggested:

(1) for flexible pavements, occasional movements by aircraft with ACN not exceeding 10 % above the reported PCN should not adversely affect the pavement;

(2) for rigid or composite pavements, in which a rigid pavement layer provides a primary element of the structure, occasional movements by aircraft with ACN not exceeding 5 % above the reported PCN should not adversely affect the pavement;

(3) if the pavement structure is unknown, the 5 % limitation should apply; and

(4) the annual number of overload movements should not exceed approximately 5 % of the total annual aircraft movements.

(b) Such overload movements should not normally be permitted on pavements exhibiting signs of distress or failure. Furthermore, overloading should be avoided during any periods of thaw following frost penetration, or when the strength of the pavement or its subgrade could be weakened by water. Where overload operations are conducted, the aerodrome operator should review the relevant pavement condition regularly, and should also review the criteria for overload operations periodically since excessive repetition of overloads can cause severe shortening of pavement life, or require major rehabilitation of pavement.

GM3 ADR.OPS.C.010(b)(2) Pavements, other ground surfaces, and drainage

RUNWAY SURFACE EVENNESS

(a) The operation of aircraft and differential settlement of surface foundations will eventually lead to increases in surface irregularities. Small deviations in the above tolerances will not seriously hamper aircraft operations. In general, isolated irregularities of the order of 2.5 cm to 3 cm over a 45 m-distance are acceptable, as shown in Figure 1. Although maximum acceptable deviations vary with the type and speed of an aircraft, the limits of acceptable surface irregularities can be estimated to a reasonable extent. The following table describes acceptable, tolerable and excessive limits.

Surface Irregularity	Length of irregularity (m)								
	3	6	9	12	15	20	30	45	60
Acceptable surface irregularity height (cm)	2.9	3.8	4.5	5	5.4	5.9	6.5	8.5	10
Tolerable surface irregularity height	3.9	5.5	6.8	7.8	8.6	9.6	11	13.6	16
Excessive surface irregularity height (cm)	5.8	7.6	9.1	10	10.8	11.9	13.9	17	20

Table 1

(1) If the surface irregularities exceed the heights defined by the acceptable limit curve but are less than the heights defined by the tolerable limit curve, at the specified minimum acceptable length, herein noted by the tolerable region, then maintenance action should be planned. The runway may remain in service. This region is the start of possible passenger and pilot discomfort.

(2) If the surface irregularities exceed the heights defined by the tolerable limit curve, but are less than the heights defined by the excessive limit curve, at the specified minimum acceptable length, herein noted by the excessive region, the maintenance corrective action is mandatory to restore the condition to the acceptable region. The runway may remain in service but should be repaired within a reasonable period. This region could lead to the risk of possible aircraft structural damage due to a single event or fatigue failure over time.

(3) If the surface irregularities exceed the heights defined by the excessive limit curve, at the specified minimum acceptable length, herein noted by the unacceptable region, then the area of the runway where the roughness has been identified warrants closure. Repairs are required to restore the condition within the acceptable limit region and the aircraft operators may be advised accordingly. This region runs the extreme risk of a structural failure and must be addressed immediately.

(b) The term ‘surface irregularity’ is defined herein to mean isolated surface elevation deviations that do not lie along a uniform slope through any given section of a runway. For the purposes of this concern, a ‘section of a runway’ is defined herein to mean a segment of a runway throughout which a continuing general uphill, downhill, or flat slope is prevalent. The length of this section is generally between 30 and 60 m, and can be greater, depending on the longitudinal profile and the condition of the pavement.

(c) The maximum tolerable step-type bump, such as that which could exist between adjacent slabs, is simply the bump height corresponding to zero bump length at the upper end of the tolerable region of the roughness criteria of Figure 1.

(d) Deformation of the runway with time may also increase the possibility of the formation of water pools. Pools as shallow as approximately 3 mm in depth, particularly if they are located where they are likely to be encountered at high speed by landing aeroplanes, can induce aquaplaning which can then be sustained on a wet runway by a much shallower depth of water. Improved guidance regarding the significant length and depth of pools relative to aquaplaning is the subject of further research. It is, of course, especially necessary to prevent pools from forming whenever there is a possibility that they might become frozen.

(e) Macrotexture and microtexture are taken into consideration in order to provide the required surface friction characteristics. This normally requires some form of special surface treatment.

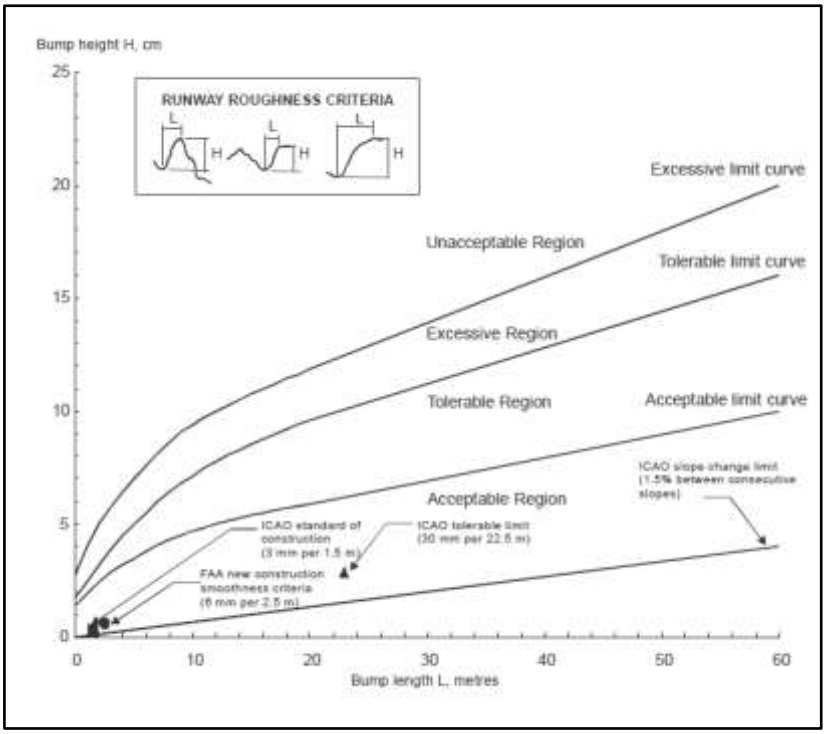


Figure 1

AMC1 ADR.OPS.C.015 Visual aids and electrical systems

GENERAL

(a) The aerodrome/airport operator should establish a system of corrective and preventive maintenance which ensures that a light is deemed unserviceable when the main beam average intensity is less than 50 % of the value specified in the applicable CSs. For light units where the designed main beam average intensity is above the specified in the applicable CSs, the 50 % value should be related to that design value.

(b) The aerodrome operator should establish a system of preventive maintenance of visual aids to ensure lighting and marking system reliability and serviceability as required for the intended operations.